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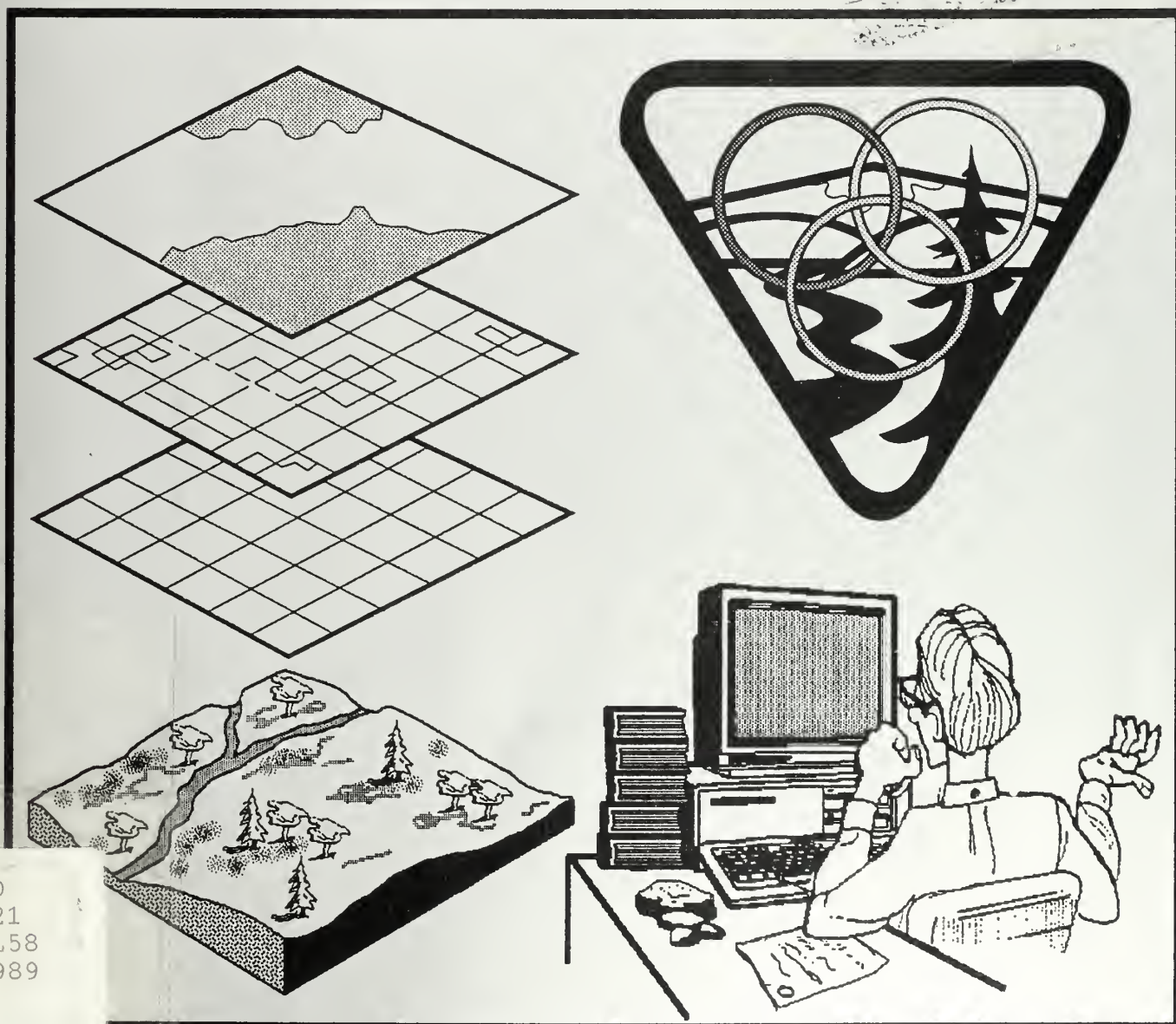
U.S. Department of the Interior  
Bureau of Land Management  
Arizona State Office

January 9-13, 1989

BLM

# Land Information System MEGA MEETING

## Phoenix, Arizona



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LIS MEGA MEETING  
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OF THE  
JAMES EARL RAY  
FEDERAL BUREAU OF  
INVESTIGATION  
WASHINGTON, D.C.

**LIS MEGA Meeting  
January 9-13, 1989  
Phoenix, Arizona**

**SUMMARY DOCUMENT**



LIS MEGA Meeting  
Phoenix, Arizona  
January 9-13, 1989

What is an LIS MEGA Meeting? Good question. In fact, there may be people in the Bureau who are not quite sure what LIS means. Well, let's start at the beginning. LIS means "Land Information System" and that is an umbrella term for the various systems that provide information on lands and resources that we manage as a Bureau. The MEGA Meeting brought together those individuals working in the component systems that comprise our LIS to share information and to conduct workshops in their own areas of expertise.

The component systems of LIS include ARD, ALMRS and GCDB. The terms used to describe these systems are self explanatory. Our Automated Resource Data (ARD) which uses Geographic Information System (GIS) technology provides data on resources in an automated manner. Our Automated Land and Mineral Record System (ALMRS) is exactly that, automated land and mineral records. Finally, our Geographic Coordinate Data Base (GCDB) provides geographic coordinate references for our resource data.

During the LIS MEGA Meeting, the Bureau brought together not only ARD, ALMRS and GCDB specialists, but also State Office Data Administrators (SODA), Mapping Science Coordinators (MSC), the Information Resource Management Advisory Committee (IRMAC), and managers from various levels of the organization. Two hundred and twenty-five people attended the MEGA Meeting. Participants included representatives of the Bureau Management Team, members of the Field Committee, Deputy State Directors, District and Resource Area Managers, and professional and technical staff from across the Bureau. Additionally, members of the Interior Digital Cartographic Coordinating Committee (Managers representing some of our sister Interior agencies) were present.

The concept of a joint meeting of all the groups working on automation was developed by the Field Committee. The Committee believed that the different "data and data support groups" were meeting and decisions were being made without full management participation; consequently, the Committee recommended a joint meeting in which Committee members would participate. Through a sharing of information being developed by the various groups, the knowledge base of the Committee, as well as participants in the meeting, could be enhanced at a one-week long session.

Arizona was given the lead to organize and orchestrate the MEGA Meeting. The concept developed was for the week to be divided into a number of joint meetings where everyone was exposed to the same information, followed by individual workshops for the six component groups: ARD, GCDB, ALMRS, SODAs, MSCs, and the IRMAC. The Field Committee was asked to have members of the component groups submit subjects for consideration as joint session topics. Forty-six subjects were submitted and the Field Committee selected fourteen. Component group leaders were each asked to prepare an agenda for six workshops which would follow the joint sessions each day. The assignments were well received and the MEGA Meeting ran smoothly.



On Monday, January 9, the MEGA Meeting began with a joint session attended by all participants, followed by the six individual workshops. Workshops and workgroup leaders were as follows:

ARD - Bob Ader  
GCDB - Bob Leopold  
ALMRS - Bob DeViney

IRMAC - Wayne Elven  
SODA - Janis Van Wyhe  
MSC - Dave Meier

This same format was followed on Tuesday through Friday, joint sessions followed by individual workshops. The joint session topics covered during the week included the following:

Monday: How the BLM Organization is Impacted by LIS and Modernization - Ron Hofman; Modernization Master Plan Update - Les Rosenkrance, Lynn Engdahl and John Moeller

Tuesday: Pilot State Progress - Monte Jordan; GCDB Effort and Contract Phasing - Bob Leopold; Training Implications of Modernization - Larry Hamilton.

Wednesday: Plans for Interim Hardware and Software Changes for LIS Development - Bob Ader; Current Hardware Being Used Bureauwide - Jack Webber; Data Standardization Efforts - Janis Van Wyhe.

Thursday: Field Committee Reports on Subcommittees - Paul Vetterick; ARD Support and Implications for On-the-Ground Work - John Singlaub; Review of the Target System Procurement Process - Brian Bernard.

Friday: LIS and Its Implications Within the Bureau, Inreach - Terry Nichols; LIS and Its Implications Beyond the Bureau, Outreach - John Moeller; Mapping Sciences Strategy - Bruce Keating.

A banquet was held on Thursday evening and one-hundred and twenty-eight people attended. Lynn Engdahl served as guest speaker and, rather than expound on a subject for thirty minutes, he asked two Area to come forward and discuss their views on LIS and the modernization effort going on in the Bureau. These two Area Managers have markedly divergent views and they stated them eloquently. Mike Ford, Lake Havasu Resource Area Manager, represented the views of those in BLM who believe we are doing a good job now and that we may not need the expense of modernization. John Singlaub, Grand Junction Area Manager, has had experience working with automated LIS technology and knows, firsthand, what it can do for the Bureau. He represented the views of those in the Bureau who are ready for the change that modernization will bring.

A Public Affairs Officer conducted some man-in-the-street interviews during the week and he indicated that the MEGA Meeting was well received. Of particular significance was the daily interaction between managers and specialists and the "after hours" meetings that occurred throughout the week. The camaraderie that was developed and the understanding that was gained should have a positive impact on the Bureau's effort to modernize the organization.

All joint session presenters were asked to provide summaries of their presentations and workgroup leaders to furnish summaries of the results of their individual workgroup's efforts. The meeting agenda and individual summaries follow:<sup>1/</sup>

A handwritten signature in black ink, appearing to read "Noel Gonzales". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

<sup>1/</sup> Four of the fourteen joint session speakers and two of the six workgroup leaders chose not to furnish summaries. If you would like more information about these particular sessions, contact the responsible individual as identified in this document.

## **OVERALL AGENDA**



LIS MEGA MEETING  
AGENDA

Monday, January 9

|           |                                                                        |                                 |
|-----------|------------------------------------------------------------------------|---------------------------------|
| 1:00 p.m. | Welcome and Overview                                                   | Granzow                         |
| 1:30      | How BLM Organization is Impacted by LIS and Modernization              | Hofman                          |
| 2:10      | Master Plan Update Including Phasing of Casper, N.M. and Alaska        | Rosenkrance/Engdahl/<br>Moeller |
| 2:50      | Individual Sessions in Break-out Rooms (GIS/GCDB/ALMRS/IRMAC/SODA/MSO) |                                 |
| 4:30      | Adjourn for the day; evening sessions optional                         |                                 |

Tuesday, January 10

|           |                                                                                                          |                  |
|-----------|----------------------------------------------------------------------------------------------------------|------------------|
| 8:00 a.m. | Pilot State Progress                                                                                     | Jordan and Staff |
| 8:40      | GCDB Effort/Contract Phasing, New Mexico                                                                 | Leopold/Oviatt   |
| 9:20      | Training Implications of Modernization                                                                   | Hamilton/Moody   |
| 10:00     | Break and Reform into Individual Workgroups for the remainder of the day (GIS/GCDB/ALMRS/IRMAC/SODA/MSO) |                  |
| 3:00 p.m. | Meeting of Field Committee Members in Attendance                                                         | Engdahl          |
| 4:30      | Adjourn for the day; evening sessions optional                                                           |                  |
| 6:00      | Dinner for any Member of Field Committee in Attendance (Engdahl's residence)                             | Engdahl          |



Wednesday, January 11

|           |                                                                                                        |          |
|-----------|--------------------------------------------------------------------------------------------------------|----------|
| 8:00 a.m. | Plans for Interim Hardware and Software Changes for LIS Development                                    | Ader     |
| 8:40      | Current Hardware Being Used Bureauwide                                                                 | Webber   |
| 9:20      | Data Standardization                                                                                   | Van Wyhe |
| 10:00     | Break and Reform as Individual Workgroups for the remainder of the day (GIS/GCDB/ALMRS/IRMAC/SODA/MSO) |          |
| 4:30 p.m. | Adjourn for the day; evening sessions optional                                                         |          |

Thursday, January 12

|           |                                                                                                        |           |
|-----------|--------------------------------------------------------------------------------------------------------|-----------|
| 8:00 a.m. | Field Committee Report on Subcommittees                                                                | Vetterick |
| 8:40      | ARD Support and Implications for "On-the-Ground" Work                                                  | Singlaub  |
| 9:20      | Review of Target System Procurement Process                                                            | Bernard   |
| 10:00     | Break and Reform as Individual Workgroups for the remainder of the day (GIS/GCDB/ALMRS/IRMAC/SODA/MSO) |           |
| 5:00 p.m. | No Host Bar Social Hour                                                                                |           |
| 6:00      | Banquet with Guest Speaker                                                                             | (TBA)     |

Friday the 13th

|           |                                                                                                                                                      |         |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 8:00 a.m. | LIS and its Implications<br>Within the Bureau, Inreach                                                                                               | Nichols |
| 8:40      | LIS and its Implications<br>Beyond the Bureau, Outreach                                                                                              | Moeller |
| 9:20      | Mapping Sciences Strategy                                                                                                                            | Keating |
| 10:00     | End of Formal Joint Session.<br>Individual workgroups have use<br>of break-out rooms until 4:30<br>if they choose to continue with<br>their meetings |         |

Note: Workgroup leaders are responsible for developing their individual agenda and for preparing workgroup summaries. Workgroup leaders are listed below.

ARD (GIS) - Bob Ader; GCDB - Bob Leopold; ALMRS - Bob DeViney;  
IRMAC - Wayne Elven; SODA - Janis Van Wyhe; MSC - Dave Meier

Joint session presenters are responsible for preparing summaries of their presentation for inclusion in LIS Mega Meeting Report.

All summaries should be sent to Lynn Engdahl by January 20, 1989.

## **JOINT SESSION SUMMARIES**



The Impact of LIS and Modernization on BLM

Ron Hofman

Special Assistant to AD, Management Services  
Washington Office



Remarks by Ron Hofman, ASD, California  
at the BLM Mega Meeting  
Phoenix January 9, 1989

Summary of Issues from the 1988 Field Committee Study  
of the Impact of Automation and Modernization on BLM  
(Hofman Dec. 1988)

It is not that BLM is doing new work, but rather the way work is done is new. ADP hardware and software are available to more and more people, but the use throughout BLM is uneven.

BLM-owned PCs are being used outside of the normal workplace and personally owned equipment is being used for BLM business. More and more data from BLM locations and outside sources are available to anyone with a PC at any location. There are new and unique communication systems being set up. There are unique local personal programs being set up to help run BLM business. There is a whole new jargon being established which is helpful to some but incomprehensible to many others. There are many positive aspects to the new ways of doing business, if they prove to be better ways. In many instances they are not better.

The bottom line is that the Bureau has to first understand automation, then take advantage of what is good and delete the bad. Those who have information, especially highly technical knowledge, use it to enhance their power, while those without information, who choose not to learn how to get it, tend to passively or actively resist progress. Evidence of this is present in the Bureau now and will become worse as automation increases, unless remedial action is taken to broaden skills and manage automation through defining new roles and functions properly utilizing organizational structures.

The circumstance of not speaking with one voice is, in part, the result of the fragmentation issue in the Bureau. It is not clear who in the W.O. makes overall policy on automation and there is no consistency on automation policy in individual programs. The DSC is involved in operational automation, but the project office is on the cutting edge of modernization development. The recent DSC reorganization should help remedy this.

There are pilot states testing various aspects of modernization, but many other states are also making advances and heavy investments in different kinds of hardware, software and applications as well.

There is also fragmentation in the technology itself. Because the technology is changing so rapidly, and in part because of procurement requirements, the Bureau has a wide variety of old, new and different brands of hardware and software as well as a variety of telecommunication systems from microwave to an array of phone systems



and companies. This leads to compatibility, single-system, and training problems.

There is also fragmentation of system responsibility. Even though ALMRS, GIS/ARD, and GCDB have been brought together somewhat in the DSC project office for development purposes, the system functions and organization responsibilities are widely split at other organizational levels.

Part of the fragmentation issue involves data management. There is a problem with standardization of lands and minerals data because different offices did different things when automating the data. The problem is repeating itself with the automation of resource data. As more offices receive Primes, data will be "locked in" using whatever standards local offices develop without benefit of an overall bureauwide strategy. The most serious fallout is the great difficulty people in and outside the Bureau have in trying to communicate intelligently. Allocation of duties and tasks throughout the organization is not bad in itself and may be appropriate as long as everyone is sure what their role is and has access to a game plan. BLM, however, has no game plan!

Another critical issue revolves around how decisions are made in the Bureau, and whether or not the standard decision-making models are adequate to deal with automation now and as it becomes even more complex in the future. Typically, decisions involving large, Bureauwide issues are made in a forum of upper level managers. The more complex an issue, the more time it takes for the people involved to get a good understanding of it, and develop a majority opinion. On many issues there is no consensus, and the minority can be passively or actively resistant.

In an issue as large and as complex as modernization with a largely unfamiliar jargon, and with a relentless schedule forcing decisions into a tighter and tighter timeframe, the standard decision-making process is highly stressed to turn out thoughtful results. Given time and good understanding, and unanimous agreement, the standard model has steered BLM through some rough going and should not be abandoned now.

The Field Committee has been forced to become highly knowledgeable about many complex issues in automation and modernization. Our subcommittee recommends several things: one is that the BMT spend more time becoming knowledgeable about automation. Another is the BMT should designate several appropriate members to become experts and to act on behalf of the BMT when critical decisions need to be made quickly. It is almost impossible to separate the policy issues from technical issues and some basic technical understanding is necessary from all BMT members.

A related issue is that many, many decisions on automation and modernization will be made outside BLM—in the Interior Department, in OMB and in Congress. BLM must, first, have knowledgeable people involved in these decision processes at all critical points, and it is

absolutely necessary that BLM speak clearly with one voice on modernization and automation issues. We recommend that someone at the W. O. and at the directorate level become the resident expert and official spokesperson before the Department, OMB, and on the Hill. It is necessary that there be informed people who speak with one voice in the routine budget process, in interactions with the appropriate offices under the Assistant Secretary for Policy, Budget and Administration, and with key sister agencies that are heavy into automation similar to BLM, such as USGS, MMS and the USFS.

This gets to the role of managers. Based on Bureauwide interviews, there are wide discrepancies in the way managers understand, accept and lead automation efforts. There seems to be an age factor. Managers tend to be in age groups that did not have ADP training or experience in their background. The average age of GS-13s is 47, GS-14s are 48 and GS-15s are 50, so it is not just managers who may lack ADP skills, it is also many other supervisory people. The average age of Area Managers is the mid 40s so many of them are in this category as well. Generally then, as we go lower in the organization and find younger people, the understanding, acceptance and utilization of automation increases. If managers choose not to become leaders and role models (as was Secretary Don Model), then they tend to actively or passively resist highly beneficial automation efforts. Another factor relates to priorities. There is no compelling reason why managers need to personally use PCs, so given other priorities many managers won't use them. Office automation functions can be useful to managers, but there may be reluctance or resistance to change by the manager's secretaries as well as the managers. The bottom line is that managers should do it, reward it, lead it, endorse it and outreach it. It's just a matter of time and if some managers don't want to personally learn to use automation themselves, they can still be leaders and do all the rest. Many managers in the bureau are leaders and role models now and are assuming the badly needed role of managing those who have knowledge about automation and those who do not.

BLM has many people with ADP skills, but another major issue is that we lack many needed skills overall and there is no systematic strategy for obtaining these skills now or in the future. Interviews revealed that many ADP and telecommunication jobs are being done by BLM people who have taken an interest in and learned something about automation. There are notable individuals who have made outstanding contributions to automation, especially in terms of specific applications to Bureau work.

The project office in DSC has attracted many people from around the Bureau with these skills, as have the pilot states. Oregon is attempting to fill positions to accomplish work on their west side RMPs. Many other states are trying to create and fill slots particularly at the District Office level. As more and more hardware and applications get going at the District Office level it is clear that it is unrealistic to service these offices from the state office location. Resource Areas which are detached are already feeling the pressure of needing the skills necessary for procurement, hookup,

testing, training, user assistance, maintenance, telecommunication etc.

Based on extensive research related to implementing automation in all types of organizations, one point is consistently clear and that is that in most cases the organization vastly overestimates its own internal capability to implement automation. This is not a pit BLM has stayed clear of in the past. The subcommittee feels there needs to be a 3-part strategy which covers: growing our own skills; working with colleges and universities; and contracting. There are obvious EEO opportunities which need to be factored-in. Personnel, training and procurement people need to become heavily involved in the planning and implementation of the strategy.

The impact of automation on roles, functions, and structure in BLM is already significant and increasing at a rapid pace as we move into the interim timeframe and finally to the target system. The key is to anticipate and manage this change, so it is not disruptive and efficiency and productivity increase as we go along.

There are traditional functions that are obvious candidates for improvement. One is records management. BLM should do an organization management study which includes docket, library, directives, minerals records, records disposition and storage, facsimile record communication, and the appropriateness of paper and electronic media for records at the state, district and area office levels. Other traditional functions which, because of automation, should be reviewed in an organizational management study are cartography, photogrammetry, remote sensing, graphics, plat drafting, etc. in the context of a mapping science structure particularly at the state offices. A third traditional function is word processing at all organizational levels. Now that most offices do their own word processing and have access to electronic mail, the concept of a centralized W.P. center is open for review. The review should look hard at the potential for using these centers as major document preparation units that include desk top publishing, and as data entry points for substantial data entry projects.

A major area of concern involving role, function and structure is data management. Confusion occurs about who inputs data, maintains it, has access to it, and who can use it, can change it, can create it, decides on the standards, and who gets to transmit and receive it etc. There is confusion about who manages the data and who manages the data system. Out of this has risen new categories of coordinators and administrators: GIS coordinators, LIS coordinators, ALMRS coordinators, GCDB coordinators, the data administrator, State Office data administrators, data base administrators. It is not clear how all these positions fit into the standard structure because they are being placed in various locations. There is confusion about the traditional role of program leads at the W.O. and State Offices. Normally, leads set the policy and procedures for all data requirements within their programs. However, when it comes to automation, some have moved out to provide guidance for their programs and many others have not. In some cases it is system design people and technical automation people who

have taken the initiative for program data management as a new role. Also, because it is the younger people who generally have the most education and experience in automation, it is the specialist at the lower level of the organization who is doing the most thinking, experimenting and actual work applying automation to their programs, turning the traditional role upside down in the organization.

There is confusion about the role and function of all the committees dealing with some aspect of automation and modernization. These include the BMT, The Field Committee and it's 9 subcommittees, The IRM-TAC, The ALMRS Rep Committee and the great proliferation of steering, and user committees at the state, district and area office levels.

There is confusion about the role and function of the Project Office at the DSC. This group has rapidly gone from an ALMRS orientation to GIS, to LIS and added the GCDB piece. The Project Office is seen by most people as being developmental in scope, yet it has had to help implement and evaluate the operational aspects of ALMRS, worry about how to position the bureau for managing the modernization effort, and how to compete for funds in the Departmental, OMB, and Congressional phases of the budget process. In many ways this office has filled the managerial role of planning for modernization. The recent DSC reorganization should remedy this.

There is confusion about the role of administration in the whole procurement process related to automation. Basically, the administrative processes don't seem to be flexible enough to take advantage of the rapid development in technology, competition, local markets, and common sense.

A final aspect of the structure issue is whether or not automation will necessitate a change in the basic 3-tier structure of the bureau. People, who are currently of the opinion that the 3 tier structure should be changed, use automation to further advance their opinions. Our subcommittee saw no evidence on which to base any decision at this time and suggests continuing analysis. The more important question is: Given the current basic structure, what are the most critical changes needed right now to handle automation more effectively?

Master Plan Update  
Interim LIS for Alaska

Lester Rosenkrance

Associate State Director, Alaska State Office



Master Plan Update  
Interim LIS for Alaska  
Les Rosenkrance/Lynn Engdahl/John Moeller

Alaska has been using an Automated Land and Record System since the late 1970s. Unfortunately, this system is dependent upon outdated and overworked hardware and software. The system is used extensively throughout the State and operates twenty-four hours a day, seven days a week.

| Existing Systems       | Maintenance Costs     |
|------------------------|-----------------------|
| Burroughs 4800         | \$128 to 150,000/year |
| Data General MV-10,000 | \$ 72,000/year        |

Alaska Interim System

|               |                |
|---------------|----------------|
| PRIME - Super | \$ 67,000/year |
|---------------|----------------|

Sixty percent of the Alaska budget is tied to the Alaska Lands, Conveyances and Cadastral Survey Programs. These programs together are in excess of \$20 million a year and are critical to the conveyance of lands under the Alaska Native Claims Settlement Act (ANCSA) and the Alaska Statehood Act.

These programs along with over 200 employees are dependent upon Alaska's existing automation system. We have been predicting the failure of the Burroughs for the past six years. Since we have not had an alternative, we keep working on it so that it will last "just one more year." The Burroughs is overloaded, programs are not well documented and attempts to increase capability causes system failure.

A little more than one year ago Alaska put in motion a plan to update our system by March of 1990. This system will utilize Bureau standards and will be an interim system to the target system.

It is essential that the interim system be operational prior to a complete failure of the existing Burroughs System. However, it is also essential that this interim system have all the capabilities of the Burroughs and the Data General Systems plus a few additional capabilities necessary to support the Alaska Conveyance Program.

We now have only 14 months to get the interim system operational.

Each BLM State will need to go through an interim development step before they can automatically go to the target system.

Every State is different.

We must all get to a common point so that we can all use a standard conversion to the target system.

The interim system is basically:

- PRIME Computer
- Using Oracle DBM System
- Having Standard Capabilities
- Using a Standard Data Base



Pilot State Progress

No Summary Provided

For Information On This Subject Contact:

Monte Jordan, Associate State Director, New Mexico

FTS 476-6030



GCDB Effort - Contract Phasing

No Summary Provided

For Information On This Subject Contact:

Bob Leopold, Acting Chief, Branch of Geographic Coordination  
Service Center

FTS 776-6420



Training Implications of Modernization

Larry Hamilton

Manager, Phoenix Training Center

Arizona



Training Implications of Modernization  
Larry Hamilton

History

The Field Committee (FC) established a subcommittee on Information and Education which developed a bureauwide training strategy.

The subcommittee presented recommendations to the Field Committee at the December 1988 meeting and the FC decided to conduct a bureauwide Needs Assessment on LIS Modernization. The Phoenix Training Center was assigned the lead with input from the Service Center, users and other outside experts. The Needs Assessment completion date is June 30, 1989.

An "Introduction to Modernization for Managers and Translators Pilot Training Course was conducted at the Phoenix Training Center in December 1989.

The Field Committee needs a more definitive description of training needs, costs and magnitude.

Mini-needs Assessment Results from LIS MEGA Meeting

How many of you consider yourself computer literate?  
Audience Response 75 percent

How many of you can type 30 words per minute with two mistakes?  
Audience Response 75 percent

How many of you can honestly say that you have a positive attitude about using computers as a tool for accomplishing your work?  
Audience Response 5 percent

How many of you consider yourselves experts in training?  
Audience Response 5 percent

How many of you have participated in implementing a modernization effort in an organization of 9,000 employees?  
Audience Response 0 percent

How do I know if I have a representative sample of BLM in this room this morning?  
Audience Response - You don't know!!

Needs Assessment Components

Performance gaps  
Target audiences  
Longevity of training needs  
Timeframe for delivery  
Stability of training materials  
Design and delivery of training

Validation - teachable moment; opportunity to perform on the job; and can you differentiate the trained employees from non-trained employees?

## Conclusion

The next six months are critical.

Statement of Work for Needs Assessment Task Group will be prepared in January 1989.

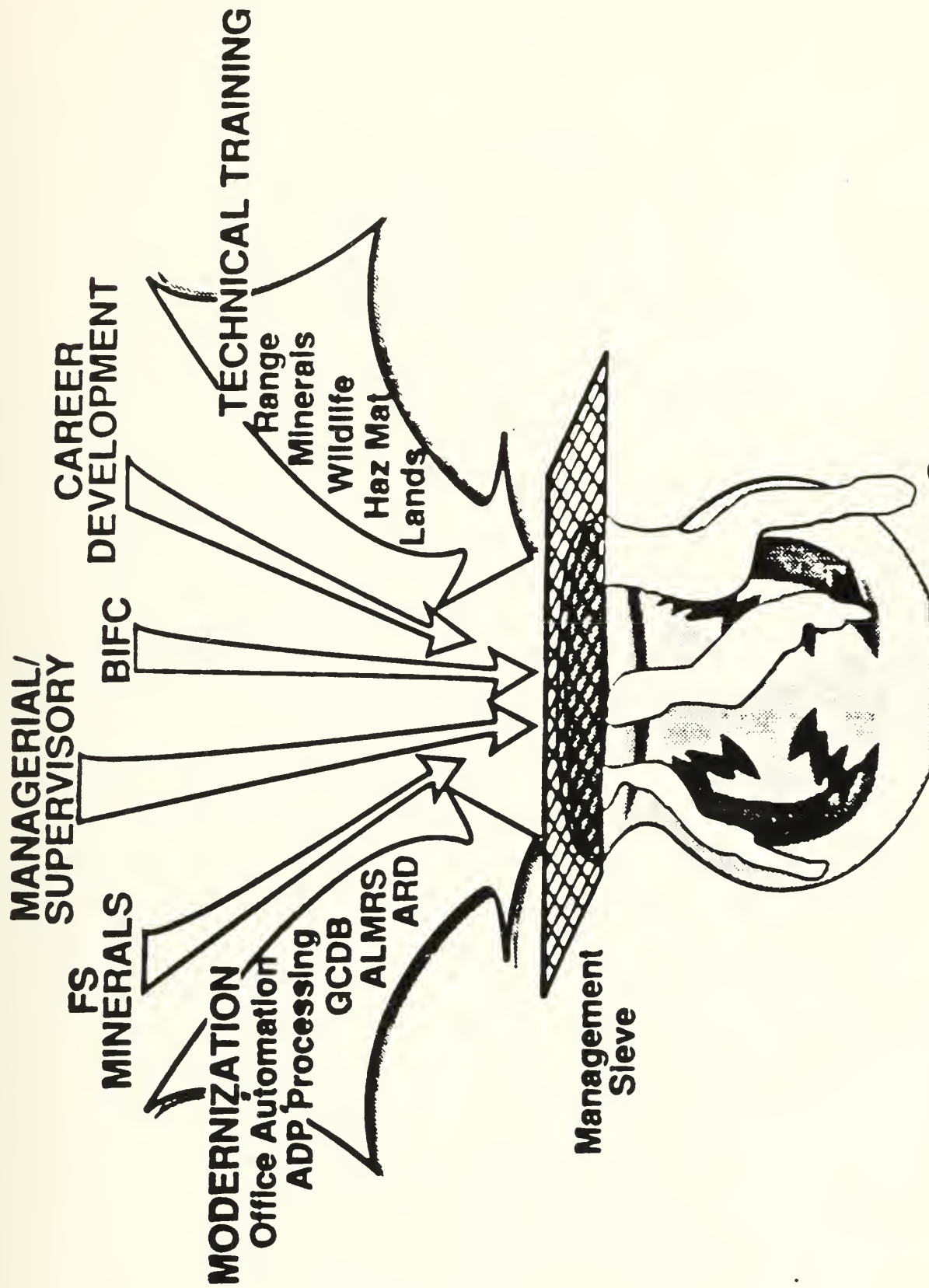
This is the largest and most complicated training challenge we have had in the Bureau.

What will the measures of success be?

A system that users utilize to accomplish their work.

Increased productivity.

Cost savings.



**BUREAU TRAINING POT**



Plans for Interim Hardware and  
Software Changes for LIS Development

No Summary Provided

For Information On This Subject Contact:

Bob Ader

Acting Chief, Division of Systems Engineering  
Service Center

FTS 776-0089



Current Hardware Being Used Bureauwide

John Webber

Chief, Division of Information Resources Management  
Washington Office



Current Hardware Being Used Bureauwide  
John Webber

Instead of starting the discussion at where we are now, I would like to take you back to the beginning of BLM's automation initiatives. From "Opportunity and Challenge - The Story of BLM" (page 213):

Automation first appeared in BLM in the mid-1950's at the Oregon State Office. They leased IBM computers for timber appraisals.

1960 - The Nevada State Office acquired a Burroughs bookkeeping machine.

1966 - BLM purchased its first computer for Cadastral Survey computations.

1975 - Alaska State Office automated a lands records system.

1978 - Honeywell Mainframes installed at the Denver Service Center.

1979 - Honeywell minicomputers installed at all the State Offices and BIFC.

1981 - Initial Attack Management System (IAMS) began deployment.

GIS

1977 - MOSS (Map Overlay Statistical System) acquired at DSC Prior to the 1986 Departmentwide GIS Contract, we had only seven GIS Data General Computers:

|                       |          |
|-----------------------|----------|
| Alaska                | MV100000 |
| Colorado              | MV8000   |
| New Mexico            | M600     |
| Wyoming               | M600     |
| California            | C330     |
| Oregon                | C330     |
| Denver Service Center | C330     |

1983 - Honeywell stopped producing Level-6 minicomputers.

1983 - Wang Word Processing Contract awarded for Office Automation capability. We now have over \$7 million of Wang equipment bureauwide.

1985 - \$2.5 million microcomputer contract awarded to Philips. Prior to this initiative, BLM had only about 200 microcomputers in its inventory.



## Where Are We Today?

In the words of a famous cigarette sales slogan years ago "We've come a long way (baby)," and still moving forward.

We now have over 3000 microcomputers representing almost every make and model known to exist - from Apples to Zeniths. We have joined forces with the Department and became participants with BOR's Departmentwide microcomputer procurement (soon to be awarded) that will give us the capability to purchase 1600 more over the next three years.

Our GIS capability has grown from seven systems at State Office level and Service Center to 65 PRIME Computer Systems at Service Center, all State Offices, and many District and Resource Area Offices. Currently we have invested approximately \$8.2 million in PRIME minicomputers for GIS/LIS processing since 1986.

While the Target System is still a few years away, there was much concern in the Bureau as to how we were going to survive the interim period with old obsolete Honeywell equipment especially when Honeywell no longer manufactured the State Office Level-6 minicomputer. The Field Committee assigned this concern to the FC Interim Hardware Subcommittee to develop a strategy for survival in the interim. After exploring various options, we decided to explore the possibility of exercising the engineering change clause in the soon to expire Honeywell maintenance contract. The Solicitor's Office said NO. The Department said H.. NO. We then looked at opportunities to accomplish this with a new maintenance contract that could provide us with new equipment for the interim. This has now been accomplished.

We now have a brand new dual Honeywell DPS-8000 at the Service Center. We are also in the process of replacing all State Office Level-6 minis with DPS-6+ computers. This new environment provides us the capability to expand. The old equipment was expanded as far as it could be. The attached fact sheet gives you a comparison of the old DPS-8/70 and the new DPS-8000.

The overhead slides show you the new expansion features of the DPS-6+, what they look like and some of their performance characteristics.

**Attachment**

COMPARISON OF HONEYWELL MAINFRAME SYSTEMS

| <u>Feature</u>                        | <u>Old DPS 8/70</u>                            | <u>New DPS 8000</u>                                                               |
|---------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------|
| Amount of Memory                      | 16 million bytes                               | 32 million bytes                                                                  |
| On-line disk data storage capacity    | 7.25 million LLinks<br>(9.3 billion bytes)     | 19.8 million LLinks<br>(25.3 billion bytes)                                       |
| No. of simultaneous users             | Theoretically up to<br>350 (TP & TSS combined) | Probably can increase<br>by 50-100%                                               |
| CPU Power                             | Factor 1.0                                     | Factor 1.7 (70% more)                                                             |
| Power Consumption (elec.)             | Factor 1.0                                     | Factor .45 (55% less)                                                             |
| Floor space (Footprint)               | Factor 1.0                                     | Factor .3 (70% less)                                                              |
| Maintenance Requirement               | Factor 1.0                                     | Factor .3 (70% less)                                                              |
| Heat Generation<br>(A/C requirements) | Factor 1.0                                     | Factor .45 (55% less)                                                             |
| Reliability                           | Factor 1.0                                     | Much higher due to<br>advanced technology<br>and new equipment                    |
| Upgrade Potential                     | Approx. 100%<br>(i.e., double)                 | Approx. 350%<br>i.e., 3 1/2 to 4<br>times power and<br>capacity we had<br>before) |
| I/O Throughput                        | Factor 1.0                                     | Factor 4.0<br>(i.e., up to 4 times<br>faster)                                     |

Data Standardization

No Summary Provided

For Information On This Subject Contact:

Janis Van Wyhe

Acting Bureau Data Administrator  
Washington Office

FTS 343-3897



Field Committee Report on Subcommittees

Paul Vetterick

Associate State Director, Oregon State Office



Field Committee Report on Subcommittees  
Paul Vetterick

Modernization will fundamentally change the Bureau. The Field Committee Workgroups disbanded as follows:

Data Administration - retail Lynn Engdahl as an on-call consultant.

I&E Training Committee - Communications assigned to LIS Staff, WO; Strategy to WO-700 and WO-800.

GCDB - institutionalized in Service Center, Washington Office, etc.

LIS Plan - Master Plan Effort Ongoing - retain Lester Rosenkrance as Field Committee Advisor.

Organization Workgroup - Ron Hofman, focal point for future activity.

Demonstration Projects - work completed.

Hardware/Software - work completed; institutionalized in SC.

Created a workgroup to address public access and charge for LIS information to be lead by Ted Bingham.

Decision made to continue Budget workgroup headed by Paul Vetterick.

Interim Program Coordinator on Alaska effort will be appointed from WO-700 (Gene Russell was recommended as a possible candidate).



ARD Support and Implications for  
On-The-Ground Work

John Singlaub

Area Manager, Grand Junction Resource Area  
Grand Junction, Colorado



ARD Support and Implications  
for On-the-Ground Work  
John Singlaub

ARD is just part of the overall LIS effort.

Expectations of managers with modernization - What do we believe is coming?  
Why do we have source of stress?

Automation is additional workload, not part of what we do for a living now.

Automation is the responsibility of ADP folks; just another program we have to manage.

Since ALMRS is funded by new money, expectation is that all modernization will be.

Reality is that ARD and what we have called GIS is coming out of our base. We are told it is part of our job, we are just changing the way we do business, and there is no additional money for it. (ALMRS and GCDB will be given to them, we are on our own for ARD.)

When this sinks in, (as at Translators training), questions are raised by people, like Joe Zimmer, "What don't I do?" "What do I give up?" "If I support ARD, what on-the-ground work won't be performed?"

This is the situation Bob Ader referred to in his short-term bulge diagram.

Why does this situation exist? Because we started the LIS concept after we had already floated the ALMRS concept to OMB and Congress. We did not want to go back and tell them we changed our minds.

How do we deal with it? We try to find a funding source, like RMPs. Some work will not get done. In Grand Junction RA, some range monitoring will not happen this year; I have an expert user range conservationist. Some surface reclamation compliance will be postponed. These are the things that I am being rated on in my PIPR, these are my widgets, and I will not be rated on my success or failure in building ARD data base, or use of GIS.

Impt: answer to managers dilemma is some things will not get done. This does not set well with BLM line managers.

Maybe this will help tekkies understand why sometimes Area Managers/District Managers may bite their heads off.

Is the Organization dealing with this? Maybe not. If this is our source of stress, the focus of training, "inreach," etc., is not solving the problem.

Similar to plan implementation training. We know how to implement the plan, we just do not have the money. We know how to automate, just do not have the money to do so, and keep other balls in the air.



Review of Target System Procurement Process

Brian Bernard

Deputy Director for Information Resources Management  
Service Center



Review of Target System Procurement Process  
Brian Bernard

Three stages:

1. Definition - define accurately.
2. Procurement - how much of that definition you want to put in effect.
3. Implementation - effectively implement.

Two contractors were hired: Prime Contractor - "Office of Technical Assistance"  
Subcontractor - "User Technology Associates"

Stayed on basic schedule as of today.

We have to ask ourselves what is defined real well; what are the unknowns; what is first, what is second; what is the best vehicle to the procurement approach; and KISS approach.

After working with the contractors, we will meet with the Field Committee February 15 or 16.

Looking at budget issues - it has been three years since first cost estimates.

Thoughts from Field Committee

1. Stayed on cost track.
2. Costs go out in July 1989.
3. September 1990 - award should be settled.
4. Structure contract to get the best pricing environment.
5. Off-the-shelf software.
6. Decentralize system as much as possible.
7. Earmarked money for ALMRS.
8. Earmarked money for Administration.
9. Not earmarked for Resources - looking for ways to do that now.
10. Change way of thinking - do not limit to Resources, etc., think circles.
11. Intertwining
12. Operational objectives - local control of data; decentralize; and produce data model generically.
13. Ensure options as many as possible.
14. Evaluate mandatory and then optional.

Risk was in technology - now that is the least risky - most important are IRM management issue and data management.



LIS Implications Within the Bureau, Inreach

Terry Nichols

Deputy State Director, Administration  
Arizona State Office



LIS and It's Implications Within the Bureau, Inreach  
Terry Nichols

The term "Inreach" describes the process by which the Bureau is starting to talk to its people regarding the LIS Program. Fewer than 20 percent of our workforce is fully aware of what we are trying to accomplish or perhaps care what we do.

This is probably due to two things: change and computers. Together, they can take the form of unlimited resistance. This can take the form of a whole management team that may be unwilling to become involved in understanding and directing the ADP Program. This has happened in the past and seems to be continuing.

In 1984, we installed the first integrated PC communications system in the Bureau. Many of the managers were uncertain about this technology - not only because it was new, but because they were uncertain whether they could handle it. The installation of this system did more for computer literacy in Arizona than any other factor. Although the Arizona monetary commitment on the Phillips CoSystem is very small compared to the millions we are going to spend on the target system, the concept of change and computers is the same.

A problem that looms very large is the fragmentation that exists both technically and organizationally. With ALMRS, GIS, ARD and GCDB in all parts of our organization, it is imperative that we strengthen our internal communications.

Managers and supervisors have to be the role models for the rest of the organization. Some of the things we have done here are:

- State Director and Associate State Director have become interested and set the tone.

- Learned the language and concepts - expect others to do the same.

- Sent managers to what training is available.

- Developed an Arizona LIS Plan.

- Initiated a State Office LIS Group that meets monthly.

- Took the Management Team to Oregon to view the WOODB Project.

- Inserted a critical PIPR item for managers to be trained in digitizing, data manipulation and map making.

- Made computer literacy a KSA in selecting a District Manager position.

Developed a demonstration project of the ARD aspects and presented it at each office in the State.

Held open house of the IRM area and computer room.

Set up PCs in the employees' lounge and the Learning Center for familiarity purposes.

Have held "brown bag" sessions about hardware and software.

Held an Arizona MEGA Meeting that covered GIS, ARD, ALMRS and GCDB.

Unfortunately, this has not been enough since many people are not yet familiar with the programs. This requires the supervisors and managers to come up to speed themselves and in turn bring the word to their workforce. It should not be the specialists that do this. The top levels need to push the information down within the organization along with the younger computer-literate people in the lower- to mid-levels pushing up.

There are few courses available to impact this knowledge; no self-teaching modules yet developed; PTC will not have its "Needs Analysis" done for another six months. Therefore, that leaves the people at this meeting to start getting our workforce involved. Until some of these other things begin to be developed, it is us who will have to carry the message and we have to begin now.

LIS and Its Implications Beyond the Bureau, Outreach

John Moeller

Acting Assistant Director, Support Services,  
Washington Office



LIS and Its Implications Beyond the Bureau, Outreach  
John Moeller

This week has been exciting. We have covered many topics and I hope each of you now know a lot more about Bureau LIS activities than when you came here on Monday. We have talked about coordination needs with others but most of our discussion has focused on BLM activities.

I would now like to spend a few minutes on an external focus. The BLM's Land Information System is only one of many efforts at automating land information.

On an international basis there is much work going on in land information management. Australia, Canada, West Germany, Switzerland and New Zealand are examples of countries that have quite extensive LIS activities and are looking at other opportunities. On another level, China, Columbia, Malaysia and Thailand are a few of a number of countries that are beginning to explore what they may do in developing modern land information systems.

Within the United States, there, likewise, is a beehive of activity. Federal agencies such as SCS, GS, FS, Census, NGS and NPS are engaged; at least 35 states have some form of LIS/GIS activities and many local governments ranging from cities to small towns are also active. The focus of these many efforts range from multi-purpose land information systems to limited single use systems and from large geographic areas to very small acreage.

Private sector activities are extensive in areas such as engineering and construction, real estate, geology and energy and railroads. Of course the computer industry itself is undergoing phenomenal development in technologies applicable to land information management. Hardware, software and more recently, data base management capabilities are another indication of the growth in land information management. Two studies about the probable LIS market indicate the growth of the last seven to ten years. In 1981, McKinsey reported two and one-half billion dollars as the probable worldwide market for automated land information for the next ten years. In 1988, figures reported by the Institute for Land Information estimated that \$90 billion dollars would be spent by State, local, and Federal entities in the United States alone in the 1990's.

Electronic atlases are, as I understand, now an option in some new car models. Trip planners, games and, who knows what else, can be envisioned for the future. Land information management is a growing area for several reasons; one is the development of technology and the arrival of what some people call the Information Society. However, the second and most important is the growing pressures that the increasing world population is placing on lands, and their resource values. Throughout the world, countries are wrestling with ways of how to better manage their lands. As I look around, I see a realization emerging in many parts of the world. That is, in order to provide for the economic, social and environmental needs of a population, the best and may be only viable long-term way of managing land is by mixing uses, or providing for use interface zones. In short, doing multiple use management. I see evidence of this in far flung areas such as Bolivia, Africa, Western Europe and China and right here in this room.

I believe that balanced multiple use management is the land management policy of the future and that we are ambassadors of that policy.

BLM is a fantastic organization. We have a number of traditional values that are very important to us individually and collectively. They are belief in service to public and to each other, the importance of and need for communication, a problem-solving approach to issues, and a belief in multiple use management.

We have an opportunity now of taking multiple use management to the next level of development in terms of assessing land capability, and of making and implementing land use. The use of automation, the integration of our survey, records, and resources information into an LIS is the vehicle to do that.

We are on a challenging journey. One which we are still developing the road map for. We must continue to meet our most important ongoing priorities and needs, but at the same time build for the future. I invite you to share in a future in which the Bureau will be better able to serve the nation because we are able to master the information and knowledge about the lands and resources we manage.

Outreach is important, we are part of a larger community. We have data that others need and we need data from others. As we develop our Land Information System, I encourage you to reach out to other countries, states, local governments, Federal agencies, associations and professional organizations. To be fully successful we must work with others and help them as well as ourselves reach common goals of better land and resource management.

Mapping Sciences Strategy

Bruce Keating

Chairman, Mapping Sciences Study Team  
Wyoming State Office



Abstract of  
Mapping Science Presentation  
Bruce Keating

The draft results of the mapping sciences study were presented, which included proposals for future actions to improve mapping science support to the Bureau and Information System (LIS) concept. Mapping sciences are defined as the methods, techniques and theories for collecting, processing and displaying positional information about the earth and its administrative, cultural and physical resources. Within the Bureau these mapping sciences are applied as required to support decisionmaking in multiple use resource management and traditionally include cartography, photogrammetry and aerial photography. The presentation demonstrated the mapping sciences support role to LIS and proposed three changes to improve support to conversion of resource data into automated resource data (ARD).

The three recommendations of the mapping sciences study included:

1. A special initiative to acquire, through cost share and work share with other agencies, the Resource Base Data (elevation, transportation, hydrography and cultural infrastructure data) on all Bureau high interest areas in FY 91 to FY 95.
2. Support and fund the State Office identified cyclic resource aerial photographic program for flying all Bureau high interest areas on a 5- to 10-year cycle. This proposal includes continuing support, at a minimum level, for the multi-agency National Aerial Photography Program for coverage of our less active blocked areas and the eastern states. Digital image (primarily satellite) processing capabilities would be continued at the Service Center and expanded to the State Offices to help construction of an automated resource data (ARD) base.
3. Adjustments and increases in allocated funding (4540) for mapping sciences support to LIS/ARD are proposed at the State and Service Center levels. Current funding is piecemeal and varies greatly state to state.



## **WORKGROUP SUMMARIES**



**GIS WORKGROUP AGENDA**



ARD/GIS Subgroup

Monday, January 9

|      |                                                                      |        |
|------|----------------------------------------------------------------------|--------|
| 3:00 | Objectives for Subgroup, Weeks Schedule                              | Zulick |
| 3:15 | Status and Schedules for the Current<br>and Interim LIS Capabilities |        |
| 4:30 | Adjourn                                                              | Ader   |

Tuesday, January 10

|            |                                                                                         |            |
|------------|-----------------------------------------------------------------------------------------|------------|
| 10:15      | Configuration Management; Strategy, Scope<br>Implementation, Roles and Responsibilities | Foster SC  |
| 11:00      | GIS Training - Where to From Here?                                                      | Zulick     |
| 11:30      | Lunch                                                                                   |            |
| 12:30 p.m. | Coordination Within and Between States,<br>Including SC and WO                          | Dwyer      |
| 1:15       | Data Base Design for GCDB: Integration<br>with ALMRS                                    | Meyers     |
| 2:00       | Break                                                                                   |            |
| 2:15       | Memorandum of Understanding Between USGS,<br>FS, BLM                                    | Sonnenburg |
| 2:45       | Systems Operations and Management Concept<br>for Interim LIS                            | Dwyer      |
| 3:15       | Break                                                                                   |            |
| 3:30       | The 100-409 Law; LIS Study                                                              | Moeller    |
| 4:00       | Charters for Field Committee and<br>GIS Coordinators                                    | Jordan     |
| 4:30       | Adjourn                                                                                 |            |



Wednesday, January 11

|            |                                                      |                  |
|------------|------------------------------------------------------|------------------|
| 10:15      | Project Planning for RMPs (RMP Status)               | Zulick           |
| 11:15      | Technical Support Services Contract                  | Foster-SC/Bierle |
| 11:45      | Lunch                                                |                  |
| 12:45 p.m. | CSU, Fort Collins GIS Center Report                  | Parker           |
| 1:15       | Discussion - Standardizing Cartographic and GIS Data | Zulick           |
| 1:45       | Break                                                |                  |
| 2:00       | Open Discussion on SC, SO, DO GIS User Support       | Zulick           |
| 2:30       | Approach to the LIS User Interface                   | Clark            |
| 3:00       | Break                                                |                  |
| 3:15       | Status of GIS in Each State                          | Sheffey          |
| 4:30       | Adjourn                                              |                  |

Thursday, January 12

|            |                                                                                           |                                                   |
|------------|-------------------------------------------------------------------------------------------|---------------------------------------------------|
| 10:15      | The GIS Software Quality Assurance Program                                                | Foster SC                                         |
| 10:45      | Can Case Recordation/ORCA Interface with GIS in the Interim LIS? Brainstorming Session    | Zulick                                            |
| 11:00      | DG Plot Files CAN be Plotted on the Prime!                                                | Bewley                                            |
| 11:15      | Using ORACLE to Import Data to GIS                                                        | Bewley                                            |
| 11:45      | Lunch                                                                                     |                                                   |
| 12:45 p.m. | Selected LIS/GIS Program Development Priorities - Panel Discussion Followed by Open Forum | Foster CA<br>Dwyer<br>Foster SC<br>Sheffey<br>TBA |

|      |                                         |            |
|------|-----------------------------------------|------------|
| 1:45 | Break                                   |            |
| 2:00 | Priorities Panel Open Forum Continues   | All        |
| 2:45 | Break                                   |            |
| 3:00 | Review of LIS/GIS Issues and Priorities | Ader/Staff |
| 4:00 | Wrap-up LIS/GIS Issues                  | Ader       |
| 4:30 | Adjourn                                 |            |
| 5:00 | No Host Social Hour                     |            |
| 6:00 | Banquet with Guest Speaker              |            |

Friday, January 13

|       |                             |         |
|-------|-----------------------------|---------|
| 10:15 | Mapping Sciences Discussion | Keating |
| 10:45 | Looking Toward the 90's     | Ader    |
| 11:30 | Adjourn                     |         |

GIS Workgroup

No Summary Provided

For Information On This Subject Contact:

Bob Ader

Acting Chief, Division of Systems Engineering  
Service Center

FTS 776-0089



## **GCDB WORKGROUP AGENDA**



## GCDB Agenda

### Monday, January 9

#### PLSS/GCDB Individual Session

- 3:00 Welcome and Over of Agenda
- 3:15 PLSS/GCDB Update and Group Discussion
- 4:30 Adjourn

### Tuesday, January 10

#### PLSS/GCDB Individual Session - two concurrent workgroups

- |       |                               |                                                  |
|-------|-------------------------------|--------------------------------------------------|
|       | SO GCDB Selecting Officials   | GCDB Data Base<br>Design Team                    |
| 10:00 | Overview of Selecting Process | Data Base Design<br>Efforts and<br>Documentation |
| 10:30 | Begin Selection Process       |                                                  |

### Wednesday, January 11

#### PLSS/GCDB Individual Session

- |       |                            |                                                 |
|-------|----------------------------|-------------------------------------------------|
|       | SO GCDB Selecting Official | GCDB Data Base<br>Design Team                   |
| 10:00 | Continue Selection Process | Continue Design and<br>Documentation<br>Process |

### Thursday, January 12

- |           |                                        |                                                 |
|-----------|----------------------------------------|-------------------------------------------------|
|           | SO GCDB Selecting Officials            | GCDB Data Base<br>Design Team                   |
| 10:00     | Continue Selection Process             | Continue Design and<br>Documentation<br>Process |
| 12 noon   | Selection Process Completed            |                                                 |
| 1:00 p.m. | Prepare Documentation for PMC Approval |                                                 |
| 2:00      | Group Discussion and Closeout          |                                                 |
| 4:30      | Adjourn                                |                                                 |



GCDB Workgroup

No Summary Provided

For Information On This Subject Contact:

Bob Leopold

Acting Chief, Branch of Geographic Coordinates  
Service Center

FTS 776-6420



## **ALMRS WORKGROUP AGENDA**



## ALMRS Agenda

### Monday, January 9

|      |                                                     |                 |
|------|-----------------------------------------------------|-----------------|
| 3:00 | Housekeeping Items                                  | DeViney         |
| 3:30 | Report on Organizational Study Committee            | Porter          |
| 3:45 | Report on Interim System/Interface Design Teams     | DeViney         |
| 4:00 | Update on 0003/1428 Conversion, 3802/3809 Standards | Heser           |
| 4:10 | Use of Bond Codes in DE 2910                        | Heser           |
| 4:15 | Feedback on Translators Training                    | Around the Room |
| 5:00 | Adjourn                                             |                 |

### Tuesday, January 10

|            |                                            |                    |
|------------|--------------------------------------------|--------------------|
| 10:30      | Standards for DE 2520/2571/2683            | Knutson            |
| 11:30      | Lunch                                      |                    |
| 12:30 p.m. | Update on Mining Claim Report Enhancements | Jacobs             |
| 1:00       | ARC Charter                                | DeViney            |
| 2:00       | Break                                      |                    |
| 2:15       | ORACLE Demonstration                       | ORACLE Corporation |
| 5:00       | Adjourn                                    |                    |

### Wednesday, January 11

|            |                                           |         |
|------------|-------------------------------------------|---------|
| 10:30      | Update on Parcel Generator Development    | Ader    |
| 11:00      | Test Cases for Interim System Field Check | Ader    |
| 11:30      | Lunch                                     |         |
| 12:30 p.m. | Getting Arc to Address Status Issues      | Jimenez |
| 1:00       | Status of Target System RFI, RFC, etc.    | Kirby   |
| 2:00       | Break                                     |         |
| 2:15       | Withdrawal Standards                      | Jameson |
| 5:00       | Adjourn                                   |         |



Thursday, January 12

|            |                                                         |                  |
|------------|---------------------------------------------------------|------------------|
| 10:30      | Exchange, R&PP Standards; Status of<br>Other Case Types | Jameson          |
| 11:30      | Lunch                                                   |                  |
| 12:30 p.m. | Data Modeling (with Data Mgmt Group)                    | Thompson/Moeller |
| 2:00       | Break                                                   |                  |
| 2:15       | Data Modeling (with Data Mgmt Group)                    | Thompson/Moeller |
| 5:00       | Adjourn                                                 |                  |

Friday, January 13

|       |                                                           |         |
|-------|-----------------------------------------------------------|---------|
| 10:30 | TRAP Committee Report                                     | Stone   |
| 11:00 | Discuss Place and Time for Next Meeting,<br>Agenda Topics | DeViney |
| 11:30 | Adjourn                                                   |         |

ALMRS Representatives Committee  
Summary  
Bob DeViney

Status reports received on the Field Check Team for Interim System Development, LIS User Interface Field Committee, LIS Translator's Course, parcel generator, data exchange with the USFS, and development of 3802/3809 Handbooks. Technical Review and Prioritization (TRAP) Committee reported findings on proposed system enhancements. ORACLE's product demonstration was well attended by members of other groups. Committee joined Data Administrators for an afternoon to learn about data modeling.

States will be asked to document workload estimates for lands case cleanup for the FY 1991 PYBP. Committee reviewed a consolidated list of proposed changes to Mining Claim Recordation System reports; results will be forwarded to the Washington Office. Comments on the Committee Charter were discussed; Chairman will consolidate and submit for approval. Voted to accept a permanent MMS representative on the Committee. Case Recordation Handbook has been rewritten and will be distributed to the states for review and comment. Conversions of Data Elements 0003 and 1428 to 0423, Data Element 2910 to 2960, and Data Element 2912 to 2961 are on hold pending completion of records data model.

Status issues will have a timeframe on future agendas to facilitate attendance by COR's and Principle Inspectors. Affirmed next meeting in Salt Lake City, May 1-5. Third FY 89 meeting scheduled for August 21-25 in Reno. First FY 90 meeting will be in Albuquerque, January 29-February 2, 1990 with a day trip to Santa Fe planned for viewing Interim System development work.

Agreed on several standardization proposals for use of Data Element 2520 and 2571 codes in Withdrawal and Classification cases. Bond rider codes will be added to Data Element 2912 for tracking State-held bonds. ORCA fix identified for action codes 121 and 128 as new definitions do not carry previous case disposition. States to provide SC-344 with nominations for Test Case Scenario Development Team by January 27.

Committee reviewed draft data standards for withdrawals, easement acquisitions, State indemnity selections, desert land entries, mineral conveyances and BLM exchanges; State comments to WO-321 by February 27. Comments on corrections to R&PP standards due to WO-321 by January 30. Description of State organization structure for land records, docket, public room and central files to CA-940 by January 27.

## **IRMAC WORKGROUP AGENDA**



## IRMAC Agenda

### Monday, January 9

|      |                                                   |             |
|------|---------------------------------------------------|-------------|
| 2:50 | Break/Informal Discussion                         | All         |
| 3:30 | Meeting Administration                            | Wayne Elven |
|      | - Distribution of Minutes from the Denver Meeting | Ed Harne    |
|      | - Review/Revision of the Agenda                   |             |

### Tuesday, January 10

|       |                           |             |
|-------|---------------------------|-------------|
| 10:00 | Break/Informal Discussion | All         |
| 10:30 | Contracting for ADP       | Dan Sedlock |
| 11:30 | Lunch/Informal Discussion | All         |
| 1:00  | Contracting for ADP       | Dan Sedlock |
| 2:30  | Break/Informal Discussion | All         |
| 3:00  | Contracting for ADP       | Dan Sedlock |

### Wednesday, January 11

|       |                                         |               |
|-------|-----------------------------------------|---------------|
| 10:30 | DSC Support Services Contract           | Bruce Beierle |
| 11:00 | DPS6+ Configuration Management          | Jim Horak     |
| 11:30 | Lunch/Informal Discussion               | All           |
| 1:00  | Status of DPS6+ Applications Conversion | Ben Rumph     |
| 1:30  | Status of Software Improvement Program  | Ben Rumph     |
| 2:00  | Break/Informal Discussion               | All           |
| 2:30  | Distributed Systems Architecture (DSA)  | Bill Rico     |

### Thursday, January 12

|       |                           |                 |
|-------|---------------------------|-----------------|
| 10:30 | COE System                | Margo Fitts     |
| 11:30 | Lunch/Informal Discussion | All             |
| 1:00  | CDROM Technology          | Darlene Simpson |
| 1:30  | GLO Records Project       | Darlene Simpson |
| 2:00  | Topic (TBA)               |                 |
| 3:00  | Break/Informal Discussion | All             |
| 3:30  | Topic (TBA)               |                 |



Friday, January 13

10:30

Meeting Evaluation/Wrap-up

Wayne Elven

- How Did We Do?
- How Can We Do It Better?
- Setting Time/Place for Next Meeting
- Review of Items to Carry to the FAC
- Review of Any Action Items
- Brainstorming of Agenda Items for  
The Next Meeting

12 Noon

Adjourn

## IRMAC Summary

The following individuals were present at the meeting:

|                 |         |                 |        |
|-----------------|---------|-----------------|--------|
| Terry Brokovich | AK-972  | Ray Thomas      | AK-972 |
| Margo Fitts     | AZ-954  | Ken Alexander   | CA-954 |
| Bob Lovelace    | CO-954  | Darlene Simpson | ES-943 |
| Arlan Smith     | ID-954  | Ernie Kemmis    | MT-952 |
| Keith Bennett   | NM-954  | Georgia Wells   | NV-954 |
| Wayne Elven     | OR-955  | Eugene Youngman | OR-090 |
| Ed Harne        | UT-954  | Glen Coffman    | WY-954 |
| Ken Reninger    | YC-400  | Roger Molinar   | SC-324 |
| John Foster     | SC-344  | Ben Rumph       | SC-342 |
| Jim Horak       | SC-342  | Mel Valerio     | SC-343 |
| Bruce Beierle   | SC-652A | Vern Schulze    | WO-250 |
| Renee Duval     | WO-770  | Rose Berezowsky | WO-771 |
| Ron DeRamus     | WO-772  | Paul Lance      | WO-774 |
| John Webber     | WO-770  | Dennis Anderson | WO-773 |

January 9, 3:30 p.m. Introductions

### Discussion of Agenda:

- Discussion about procurement of Cadastral PCs. They want COMPACs and some non-standard software. Bob Leopold was added to the agenda for an update on GCDB.
- Margo will report on Printing and Publishing Committee.
- Dennis Anderson will briefly discuss cost recovery, IRMP Guidelines, Program Package update, and Honeywell Systems Contract.
- Ron DeRamus will discuss GEONET/FTS-2000 and LANs.
- Terry Brokovich requested office automation be discussed in a roundtable session later during the week.
- Rose Berezowsky requested that she be added to the agenda to discuss records issues.
- Gene Russell and John Moeller would like to discuss PDs, training etc., as they relate to LIS.

### Other Discussion:

- Concern about supporting RETARS on the minimally configured DPS-6s were expressed.
- Discussion about developing a contracting approach to upgrade the Honeywell DPS-6s. Dennis Anderson said he hoped to have something in place by the end of the fiscal year.

- Question on the status of the DOI Micro Contract. Award will probably be in February. Best and Finals due January 20.
- We need to update the Contracting for ADP Handbook, H-1510-7, to reflect the changes implemented in WO IM No. 89-50. Assign to Arlan Smith to get changes made and give to Joe Federline.
- Ed Harne passed out Handout No. 1, Draft Minutes from the November 1988 IRMAC Meeting. He requested comments to him by January 25, 1989 so the minutes may be finalized.
- Jim Horak passed out Handout No. 2, Draft Paper on Configuration Management for the Honeywell Systems; Handout No. 3, Individual State Lists of HVS-5 Manuals required/optional and Handout No. 4, DPS-6 Software for Each State. Jim suggested that all states try to get their manuals before DPS-6 installation.

Tuesday, January 10, 10:00 a.m. Procurement

This was a special joint meeting of IRMAC and Bureau Procurement Staff to discuss specific ADP Procurement issues.

Dan Sedlock

- Handout Nos. 5-9 were distributed; DSC ADP Procurement Organization, Procurement Thresholds, two Federal IRM Regulations, Specifications and Solicitation Provisions.
- Discussion of WO IM No. 89-50, ADP Five-Year Plan. The changes in thresholds were reviewed. Also the requirement for ADP Procurement Plan approval was discussed. It was determined that the ADP approval criteria internal to IRM and did not require adjudication by procurement. It was sufficient that procurement only look for IRM's "ok" with each requisition.
- There is a problem with field offices not submitting requisitions for PRIME maintenance to the Service Center promptly. This creates processing and billing problems for the Service Center. All requisitions for FY 1989 PRIME maintenance not yet submitted to the Service Center should be submitted ASAP. We need to get requisitions to the Service Center by November 1, 1989 for next fiscal year.
- States were requested to review the Contracting for ADP Handbook and give comments to Joe Federline. It will be updated to reflect changes in policy.
- There was discussion of GSA Schedules 58 and 70. After reviewing the regulations concerning their use, there was no precise direction as to how they should be used. There is room for different interpretation of the regulations.
- GCDB collection contract was discussed. Contractors will provide the space and BLM will provide all of the equipment to do the collection. August 1989 is the target date for contract award.

## End joint meeting of IRMAC and Bureau Procurement Staff

Wednesday, January 11, 10:00 a.m.

- Additional handouts were distributed: Handout No. 10, Payroll Problems Plague Interior's Payroll/Personnel System and Handout No. 11, Archives GSA's Draft Records Management Rule.

### TGS Contract - Bruce Beierle and Randy McKinley

- Handout No. 22, Explanation of Contents and Use of Contract YA-652-CT9-440005 - TGS Technology Incorporated, was distributed.
- The new SC Support Services Contract with Technicolor Government Services (TGS) can be used by field offices. When needed disciplines or type positions are identified, call Bob Green, SC, and get specific per hour costs. Once they are developed, send in the task order and requisition to Bob Green.
- The only offices identified for on-site support were the Service Center and California State Office. This is different from some earlier information which said that support could be obtained at any Bureau site.
- It was agreed that IRM in each state should at least review the task orders. Designation of Task Order Managers was discussed. If any state anticipates significant use of the contract, a Task Order Manager should be trained. Things to avoid include co-mingling of funds. In other words, funds are specific for each defined task, they cannot be used for other tasks and they cannot be withdrawn until the task is complete. Caution: be very specific about the final products and avoid all changes to orders, they add cost.

### Honeywell Systems Configuration Management - Jim Horak

- Refer to Handout No. 2, Draft Plan for Honeywell Configuration Management. It was based on PRIME Configuration Management Plan but places less emphasis on support of applications.
- Jack Webber proposed that each state respond to WO-770 by February 13, 1989, where they will consolidate responses and work with the SC to have a Honeywell Systems Configuration Management Policy by the April IRMAC Meeting. Jack stated that he would like an overall Configuration Management Policy with separate sections for major systems.
- The difficulty with implementing Configuration Management in the Bureau is that applications have been allowed to dictate configuration.
- The requirement for each state to comment on the Service Center's Hardware/Software Tracking System on the DPS-8000 was restated. Few states have made an effort to try the system. Jerry Carlander, SC-342D, currently has the lead for the System. All states should be prepared to present comments at the April IRMAC Meeting.

- Keith Bennett mentioned that New Mexico is running out of LLinks on DPS 8000 because of GABS.

#### LIS Update - John Moeller/Gene Russell

- There is some conflict evolving between the LIS organization and WO-770. There are no clearly defined roles and responsibilities, especially in regard to the LIS effort. This is also true of the SODA function at State Offices.
- The whole area of Data Administration needs to be better defined and responsibilities delegated. These problems are aggravated by a widespread mistrust of IRM and lack of understanding of the LIS Program.
- The IRMAC should get involved in training in preparation for LIS. Suggestion of an IRM training plan for each state. ORACLE training was specifically mentioned as being needed in the near future. This is an area IRMAC plans to address at the next meeting.
- There has been a change in the nature of ADP type work within the Bureau. At one time nearly all ADP people were programmers. This has changed and, while some programming is needed, most of our ADP workload requires people with a broad mix of ADP skills, much of it with software utilities such as dBase. This makes classification of positions more difficult, as many classifiers view such work as less difficult. This is another area that IRMAC should examine.

#### Honeywell Distributed Systems Architecture - Bill Rico, HIS

- Representatives from Honeywell Information Systems gave a presentation on Honeywell's DSA products. DSA is a set of rules which governs data communication between systems and end points in a communication network. The Honeywell DATANET-8 system could support total networking of all Honeywell Systems in the Bureau. Handout No. 12, Honeywell DSA, copies of presentation graphics, were distributed. One product mentioned, VIP-3, supports VIP-7800 emulation and Kermit transfer.

#### Data Administration/Standardization Process - Dick Traylor - ADDA Land & Renewable Resources

- Data Classification Structure includes the following components:
  - Location - PLSS, GCDB
  - Common Resource Data - Soil, Vegetation, Geology, Wildlife, etc.
  - Resource Management - Allotments, Area Boundary
  - Physical Facilities - Campgrounds, Buildings

The current priority is common resource data sets. The first cycle will identify the data element, standard description and coding; no data will be collected. We will be working with the USFS on the standards effort. The standardization effort uses dBase III as a tool for the inventory process.

- The purpose of the process is to identify corporate data. The team leader will sample states, information flows into the team leader and the analytical process will result in a draft report that goes out to all SODAs. The SODAs will determine how to have it reviewed.
- Management review along with a broad review by subject specialists is important to the success of the effort.
- After the standard has been established, the modeling team and pilot projects will receive and test "standard."

#### Eastern States - General Land Office Records Project - Darlene Simpson

- Eastern States Office video was shown. Him Horan, ESO LIS Coordinator, explained need for the Eastern States - General Land Office Records Project. It is estimated to be a four-year project and then only doing the Eastern States.
- CD-ROM Technology - The ESO is using CD-ROM in its GLO Records Project. Handout No. 13, The Memory Miracle, Optical Storage Technology, was distributed. The remainder of the presentation was a demonstration of a CD disk on a PC.

#### GCDB - Update - Bob Leopold

- Bob mentioned the fact that GCDB purchased a significant amount of PRIME computer equipment at EOY in FY 1988 for GCDB. He also discussed the 386's each state will order. The mention of COMPAC was a recommendation only.
- Bob believes that a Level-D will support GCDB if it works in an upload mode to a PRIME Level-A. Some concern about capacity planning and configuration management were expressed.
- GCDB will be designed using ORACLE RDBMS. The Beta test site should identify any facilities requirements.
- NMSO is using a front-end processor to get around PRIMENET port limitation (three-port limitation).
- BLM will provide system administration and computer operator support to the GCDB contractor. This could have a significant impact to the State IRM operations, especially the need to provide operator support.
- GCDB staff will do DM 376 justification for any new PRIME Systems needed, States will have to do five-year plans. Jack and Dennis should address the impact of GCDB requirements on the five-year plans, especially in light of the probable timing of the submissions.

#### CoSystems Demonstration - Margo Fitts/Kathy Seegmiller

- Handout No. 14, Information on CoSystems, was distributed. The handout included repair information and instructions on setup and use of the CoSystem.

- Each dialing path will have to be individually defined. This means that each CoSystem installed will require the correct dialing sequence to be determined for each number called and the system so configured.
- It was recommended the systems be implemented from the State Director down.
- Arizona has used a single phone number for those offices without a PBX.
- Programmable keys can be setup to do phone call holds, transfer, etc.
- Logon to Compuserve can also be initiated from the programmable keys, but should be password protected.
- A system code which allows access to password setup was provided.

#### Records Update - Rose Berezowsky

- Handout No. 15, Optical Imaging Systems - Interim Policy, was distributed. Please have comments to WO-771 by February 15, 1989.
- Handout No. 16, Electronic Records Management - CFR 1234, was distributed. Please have comments to WO-771 by January 25, 1989. Please show to your Records Manager at each State Office.
- Handout No. 17, Information Resources Security Training Contract No. 9-CS-81-15420, only one copy distributed. Copies will be mailed to each state.
- Handout No. 18, Annual Bureau IRM Security Plan, only one copy distributed.
- There was some discussion of the proper location for ADP Security function and training. We need to get State training people involved. There is still a problem with ADP Security Officer on IRM Staff in most states.

#### GEONET-II/FTS-2000/LANs - Ron DeRamus

- GS received BLM's submission of traffic estimates for GEONET. There is a lot of confusion on GS's part and they appear to have misinterpreted the Bureau's submission.
- FTS-2000. There is a slight possibility that MCI will protest award to AT&T and Sprint. There is concern within the Department that procurement authority for GEONET-II will be withdrawn because of award of FTS-2000.
- AT&T is emphasizing its support for data communications under FTS-2000. There remains much confusion as to how implementation of FTS-2000 will evolve.
- The Department has produced a guidebook on LANs for the office of the Secretary only. There is still no DOI policy. 377 DM.1 needs to be written. BLM plans to issue its own policy without waiting for a DOI policy to be issued.

## New Disk Management Policy - Jack Webber

- There will be a new Disk Management Policy for the DPS-8000 coming out soon. The IRMAC will have a change to review the draft.

Friday, January 13, 10 a.m.

## Wrap-up Discussion

- WO is trying to develop a procurement plan identifying upgrades to Honeywell Systems, therefore, a procurement instrument can be in place by the end of FY 1989. Honeywell GSA Schedule 70 should be out by end of January.
- RETARS concerns were discussed. Oregon will benchmark RETARS in February.
- Budget package directives will be out soon. Dennis asked that states try to project their costs accurately. Also, WO is looking at an add-on in 4530 to support O&M.
- Cost Recovery. A Field Committee subgroup is looking at cost recovery/cost accounting. They are trying to standardize rate structure then study the implementation issue. Their report will be out in April. Task orders were given to the Field Committee in November.
- ORACLE training. Laura Davis received training needs information from only a few states. She was unable to identify an opportunity to consolidate training at this time.
- Scanning contract is now available for digitizing. John Foster distributed Handout No. 19, Document Scanner Technology.
- Quarterly reports (of ADP purchases) are due within three weeks after quarter end.
- WO was requested to provide guidance for disposition of L-6s.
- Handout No. 20, dBase IV Evaluation and Handout No. 21, WP 5.0 Evaluation, were distributed.
- Discussion followed on how new releases affect standards. There were many in favor of routinely migrating to new releases.
- Dennis Anderson said that GCDB should prepare five-year plan for PRIMES for GCDB implementation. This differed from comments presented during Bob Leopold's presentation.
- Dennis Anderson will contact Bob Leopold and ask that there be a consolidated buy on 386 machines for GCDB.
- Paul Lance wants to know about any variation from the planned distribution of CoSystems.

## Printing and Publishing - Margo Fitts

- There are no changes in the hardware or software recommendations; however, they backed off from specifying Public Affairs to avoid conflicts due to variation in organizations or functions. Also the organization levels do not specify SO/DO/RA, now it just refers to three general organizational levels.
- Distributed handout No. 23, Electronic Publishing Environment, Hardware/Software Configuration.

Meeting adjourned.

## Action Items

- Review minutes of November IRMAC Meeting and get comments or corrections back to Ed Harne by the end of next week.
- All offices should try the Service Center's HW/SW Inventory System. Evaluate it and be ready to discuss its utility at the next IRMAC Meeting.
- Review the Honeywell Configuration Management Plan and send comments to WO-770 by February 13, 1989. WO-770 will review the comments and issue an instruction memorandum on Configuration Management.
- Maintenance requisitions for PRIMEs should be submitted to the Service Center ASAP. Get them in if they have not yet been submitted.
- WO-770 will distribute a copy of BOR micro-contract to all members once it is awarded.
- Paul Lance will send a standard configuration disk for CoSystems.
- All comments on the Electronic Records Management should be submitted to Rose Berezowsky, WO-771, by January 25, 1989.
- All comments on the Optical Imaging Systems - Interim Policy should be submitted to Rose Berezowsky, WO-771, by February 15, 1989.
- Rose will send copies of the annual security plan that was submitted to the Department.
- Contracting for ADP Handbook. Get changes marked up and submit to WO-770 by January 31, 1989. WO-770 will coordinate changes with Joe Federline.
- WO-770 will distribute copies of the revised LIS Master Plan to all members when it is released in January.

## Future Agenda Topics

- LCM - Where Do We Go With It?'
  - IRM Training - How Do We Get More Involved? Where Do We Go From Here?
  - Classification/standard PD Issue
  - Office Automation (interim strategy)
  - Brian's LIS Working Group
  - Paul Lance's Working Group on Data Interchange
  - Capacity Planning for the PRIMES
- The Eastern States Office will host next IRMAC Meeting, tentatively scheduled for April 17-21, 1989.

## List of Handouts

1. Draft Minutes IRMAC Meeting - Denver, October 31-November 4, 1988
2. Draft Configuration Management (Honeywell Systems)
3. HVS-6 Manuals (separate list each state)
4. DPS-6 Site Software (separate list each state)
5. Branch of Information Resources Acquisition - Organization Chart
6. ADP Acquisition Threshold Summary
7. Federal IRM Regulation, Part 201-32, Contracting for ADP Resources
8. Federal IRM Regulation, Part 201-11, Competition
9. Specifications and Solicitation Provisions
10. Article: Problems Plague Interior's Payroll/Personnel System
11. Article: Archives, GSA Draft Records Management Rule
12. HIS Distributed Systems Architecture - copies of presentation graphics
13. Article: The Memory Miracle - Optical Storage Technology
14. Packet of Information on CoSystems
15. Optical Imaging Systems - Interim Policy
16. Electronic Records Management, 36 CFR Part 1234
17. Information Resources (Security) Training Contract No. 9CS-81-15420
18. Annual Bureau IRM Security Plan
19. Document Scanner Technology
20. dBase IV - A Preliminary Evaluation
21. Word Perfect 5.0 Evaluation
22. Explanation of Contents and Use - TGS Contract YA-652-CT9-440005
23. Electronic Publishing Environment - Hardware/Software Configuration

## **SODA WORKGROUP AGENDA**



## Data Administration

MEGA Meeting January 9-13, 1989

### Monday P.M. Data Administrators - Roles and Responsibilities

VanWyhe and Russell

This segment will attempt to further identify the emerging Data Administration roles and responsibilities. Initial discussion on this subject will have occurred during the Data Administration Training held in December.

### Tuesday A.M. Data Dictionary

Dick Burkholder (SC)  
Mike Thompson (SC)

This segment will give a review of the Data Dictionary function, purpose and future use. Dick will give the history of the current DED and its problems and Mike will describe the future use of a dictionary and what has to be done to make it useful.

### Tuesday P.M. Data Integration

Sam McGomery (NM)  
Tom Adler (SC)

Sam will discuss his experience in the Farmington project and the difficulty of making BLM data fit together to produce a product. Tom will give a status report on match/merge and the future of that process.

### Wednesday A.M. Ownership and Responsibility for Data Panel

Dick Traylor (WO)  
Tom Costello (SC)  
John Kwiatkowski (MSO)  
Terry Plummer (DM, Battle Mountain, NV)  
John Singlaub (RA, Grand Junction, CO)

A view from each level of the organization describing its role, responsibility and authority for managing (owning) information. The intent of this segment is to give the Data Administrators the benefit of hearing how each level sees its role.

From this, a clearer picture of BLM inconsistencies (if any) will emerge and we can begin to address the issues. This should be a very interesting afternoon.



Wednesday P.M. META Data

Steve Wing (AZ)

This segment is an entry into inventorying and describing our data. It is becoming critical in spatial data because it will provide such information as projection, scale, date and source. In our traditional data, it will describe data files, sources of information, accuracy indication and much more. This effort, as it unfolds or develops, will become the backbone of our information management process.

Thursday A.M. Data Accuracy and Quality

Mike Dwyer (NM)  
Sandy Porenta (NM)

Quality of data is key to confidence in any of our systems. Mike will describe the "clean-up" effort in New Mexico and their commitment to accuracy. Sandy will discuss managing a major data collection contract and concerns with accuracy where accuracy was a fixed requirement of the contract.

Thursday P.M. Data Conversion - Data Modeling

Mike Thompson (SC)  
Brenda Moeller (AK)

Logical data modeling, physical data base design, ORACLE keys, products and conversion problems will be the main subjects of this period.

Friday A.M. Potpourri

Any subject surfacing during the week that requires further attention.

## Roles and Responsibilities

Janis VanWyhe

- A. Process of Salesmanship
  - 1. DA's must learn and sell at the same time
- B. BDA puts out policy, budget guidance and program guidance
  - 1. Make sure that we have the most effectiveness management of our data
- C. Contract with National Systems and Research (NSR) to develop a preplan for data administration
  - 1. A charter or delegation of authority to DA
  - 2. Tailor that to the BLM
  - 3. DA's must use this to carry out the functions of DA
  - 4. End of 1989 to have plan in place and working
  - 5. Business enterprise model
    - a. A model of the BLM's business as it does it
    - b. Timeframe is FY 89, mid-calendar year
  - 6. Draft plan January 20, 1989 - for review by SODAs
    - a. Comments back by January 27, 1989 - Use Email to Janis
    - b. Sherry Larsen is with NSR
- D. Responsibilities of BDA (and ADDA's)
  - 1. Enterprise Model must be pushed by BDA
  - 2. Naming conventions
  - 3. Users responsible for data accuracy and where it resides
  - 4. Coding Standards
  - 5. Temporal Standards
  - 6. Quality Control Standards
  - 7. Data Security
  - 8. Cost Recovery
  - 9. Lead the effort to get data entered into the system
    - a. May have to take a risk on entering non-standard data
    - b. No new system development
  - 10. Training the rest of the Bureau and ourselves on Data Administration
  - 11. Data administrators have to carry a big hammer.  
May be an unpopular position
- 12. MOU's and agreements with other agencies

Gene Russell

- A. Distributed Network and Standard Inquiry
  - 1. Distributed Network
    - a. Linking all computers in BLM together
  - 2. Standard Inquiry
    - a. One system that can be queried from anywhere in the Bureau

## B. State Data Administrator's Role

### 1. Data Exchange

- a. Federal, State, Private
- b. With the program, whatever, but now DA will have to be the focal point (security and other reasons)
- c. Security (Rose Berezinski)
  - (1) Information on all media
  - (2) Access and Technological
  - (3) Decides what needs to be protected - computer experts decide how
  - (4) Rose will look at data elements for security
  - (5) Three communities to monitor
    - (a) Within Bureau
      - (i) need to know (who within BLM)
      - (ii) state by state
    - (b) External nonpublic users
      - (i) no legal requirements
      - (ii) open for negotiation (MOU's, etc.)
    - (c) Publics
      - (i) lot of legal requirements
      - (ii) access to maximum extent
        - (a) 9 exemptions (FOIA)
        - (b) case-by-case exemption
      - (iii) pay requirements very legal
  - (6) Privacy Act
    - (a) applies to some computer files
    - (b) depends upon what information is kept and where it is used in finality
    - (c) draft access manual is ready about the first part of next month
  - (7) Computer Security Act
    - (a) sensitive information
    - (b) who is accountable
- d. DA will have to be focal point for data transactions within the different State Offices
- e. Brenda Moeller
  - (1) Responsible for overall design, planning and control and management of data to represent BLM's information. Ensure that data design effectively represents the information required to support the business objectives of the organization.
    - (a) Strategic Data Planning
    - (b) Logical Data Design
  - (2) Ensure that data bases accurately represent the organization's data design. Minimize redundancy and maximize the utility and compatibility of data bases by ensuring that each data base is a realistic representation of a portion of the organization's data design.
    - (a) Develop physical data models derived from the organization's logical data design

- (3) Responsible for establishment of standards, procedures and training required for the effective design of data to represent the organization's information
  - (a) Develop, maintain and enforce data administration standards
  - (b) Develop, maintain and enforce standards for interface between CASE tools, data base management systems and the central data dictionary
  - (c) Develop standards for interface between the data design process and the system design process
- (4) Responsible for the implementation and maintenance of a central data dictionary. The dictionary will document the organization's data design, making possible effective data base and information systems development
  - (a) Implement data dictionary
  - (b) Develop and maintain definitions of BLM's entities, data elements and data uses (data stores and data flows)

Dick Burkholder

- A. Requirements for data definitions are becoming necessary
- B. Need to convey information exists once the data is electronically contained
- C. A dictionary provides a container for data terms, definitions data sets
- D. Synonyms will kill you in an automated system
- E. A DED avoids the reinvention of definitions
- F. It must be easily accessible to user
- G. Designed to standardize and document BLM's information in automated systems
  - 1. All systems do not access the dictionary
- H. Use of the current dictionary is all that is covered in this presentation
  - 1. Dick used the attached handout to acquaint people with the data dictionary and how it might be used during data entry
- I. Must make sure the changes get made in the Service Center because they are responsible
- J. Changes
  - 1. Use an informal bulletin board as does ALMRS
- K. Public Land Statistics
  - 1. Many of the public land statistics come from the data dictionary

Brenda Moeller

- A. Field Relationships E/R Model
- B. Dictionary is Oracle and is on PCs
- C. Attributes, information about data structure, definitions, naming conventions
- D. Does a lot of checking for you
  - 1. Checks each entry against data elements in dictionary
  - 2. Is cross-referenced against existing DED in SC
  - 3. Strictly a text check

Mike Thompson (Future Dictionary)

- A. CRUD
  - 1. Current dictionary (DPS8)
  - 2. Interim dictionary (ORACLE)
  - 3. Future dictionary (?)
- B. Application 2006
  - 1. Cross-walk existing dictionary to new interim
  - 2. Document what we are taking to new dictionary
  - 3. 2006 is the tracking element
- C. Data dictionary development objectives
- D. Transition dictionary - Future application
  - 1. Stand alone dictionary
  - 2. Integrated dictionary

Sam Montgomery (Farmington)

- A. Data Base Integration
  - 1. Integration of data is harder than what is anticipated
  - 2. Data must be standardized to be integrated
- B. Bean counters can count beans from the State or District Offices from the RAO information
- C. Meridian Oil Company has a line into the PRIME so that they can track their APDs. In turn, BLM can track Meridian's truck logs so they know where they are and what they are doing
- D. Can get preliminary data from BLM's computer without coming into the office. New Mexico can do that now, particularly with ALMRS data

Tom Adler

- A. Match/Merge System
  - 1. See Tom's handout

- B. M/M Interim Use
- C. LLD
  - 1. Not new - 1978
  - 2. Alaska - June 1988
- D. Key M/T/R/S
  - 1. Only one record per key survey NBR/SUF
- E. Geo reference area or Geo table will not be used in future
- F. Each field is element in DED
  - 1. Will be edited
- G. Other uses - i.e. number of special surveys per township
- H. Already able to integrate other systems
  - 1. Serial number ties cases together
  - 2. Conversion table in M/M system
  - 3. Mining claims other system - drop down to quarter/quarter
  - 4. NE case type per serial number

Evening Meeting - Tuesday, January 10, 1989

Gene Russell

- A. Update on how we got to where we are now
  - 1. Minerals automation began in 1978 - Interim system 1990
  - 2. Case Records began in 1983 - Target system 1992
  - 3. Status Records began in 1985 - Funding from monies set aside for ALMRS
  - 4. Lands survey began in 1988
- B. 1986 - decision to expand ALMRS to automate the entire BLM
- C. 1986 - decision of Director to manage information as an asset
- D. 1987 - beginning of Data Standards
- E. 1987 - Bureau purchased PRIME system as beginning of "standardized system"
- F. 1988 - SODA positions recognized as being needed for first time
- G. Why did these decisions lead to Data Administration as we know it today?
  - 1. BLM had Data Administration before, but it was unrecognized because data needs were scattered all over the Bureau
    - a. With the advent of computers and the target system, data will be centralized or access to data will come to a centralized point
  - 2. BLM did not use standards. Each speciality gathered its own data and kept it in its own place. Data were not mixed or, if so, were mixed with the specialists all sitting down together to do it
    - a. With the advent of computers and the target system, data will be centralized and can be mixed only if it is collected to certain standards that computers can understand and that make sense for the data collected

3. Data exchange was done primarily from specialist to specialist
  - a. There was no quality control and no security consciousness. Security is new and something that new laws are forcing us to worry about
4. Outreach has been undertaken; this effort is known about throughout the government and other places. Therefore, we must manage it so that it will be a good job.

H. What do the SODAs do

1. Data Standards
  - a. Identify them
  - b. Implement their use
  - c. Enforce their use
2. Data Processes
  - a. Data Access - what is accessible and how is it accessible
  - b. Data Collection - who collects it; how is it collected; how is it entered into the system
  - c. Data Exchange - SODAs as a focal point for contact of information and should work out agreements for exchange, protection of sensitive information, etc.
  - d. Security - with the new laws on the books governing data security in computer systems, SODAs will have to be part of this security to make sure that data passed in an exchange is protected if the need is there
3. Focal Point for State Data
  - a. SODAs should serve as a focal point for information about the data available, access to data, data exchange, etc.
4. Bureau Policy Interpretation
  - a. SODAs should serve as an interpretation of policy from WO and others regarding data
5. Collection Point for Bureau Data Efforts
  - a. SODAs should serve as the focal point for Bureau data efforts
6. Cost Recovery Collection Point
  - a. As part of the focal point, SODAs should function in the realm of assuring that proper fees are paid for information gathered from Bureau computer systems
7. META Data
  - a. SODAs must assure that data are collected about data that is kept in the Bureau's computer systems
    - (1) Shelf Life of Data - how long is it good for
    - (2) Contacts - where did the data come from; who gathered it
    - (3) Method of Collection - how was it collected; is it specific or general
    - (4) Etc., Etc.
8. See Gene's handouts on data checklists

## I. Budget

1. Data Administration is to be reflected in the 1991 budget and interim budgets are to be modified to reflect the need for data administration.

## Jerry Asher

- A. Jerry took a "trial run" to Prineville on the vegetation data set. The following problems and recommendations were identified:
  1. The folks were oriented for one and one-half hours
  2. Forms were filled out for three hours
- B. Most of the blanks on the form generated questions and more specific direction would be needed to get the forms filled out.
- C. Training to do this will require about one day.
- D. This is unplanned work. There are no benefits to be seen right away. People need to see how it will benefit them in the near future, not four to six years down the pike.
- E. People in the field had a hard time understanding why we are not using existing data in the Data Element Dictionary.
- F. Success Criteria
  1. Management needs to understand, support and tell people the importance of this effort.
  2. Anyone can complete this form
    - a. Must be fully trained
    - b. Must be completed aside from other jobs, visits, etc.
    - c. Someone must be responsible for the data that is put on the form
    - d. There should be a cadre to assist the SODA in the inventory from beginning to end (one person/ resource)
    - e. Cover page with signatures of people who completed the inventory
- G. Alternatives to the present way we are doing things
  1. Team create data set
  2. Statistical sampling of offices to participate in the inventory
  3. One team per data set per state to do inventory in a group
  4. One program lead in State to do inventory for data set
  5. Start with DED and validate existing data, clean up definitions
  6. Data modeling as the process
  7. Existing - each State decide on how to participate on the inventory
  8. There was a long discussion on the advantages and disadvantages of each of the alternatives
  9. Elements 1, 2 and 3 were eliminated
  10. Combine Elements 1, 4 and 5 to read:
    - a. Team create data set starting with DED and other sources (States, stand alone systems, etc.) and have the program leads review for validation, addition of new elements, etc.
    - b. Adjourned to carry the discussion following tomorrow's meeting. Decision to be made at that time.

Panel Discussion (Data Ownership)

Dick Traylor

- A. Ownership means different things to different people
- B. Ownership is probably an inaccurate term
- C. Ownership can be a feeling or a manner in how you treat the thing over which you claim ownership
- D. Today I am addressing ownership as it applies to Corporate Data
  - 1. Corporate Data is:
    - a. Needed by or supplies input to a WO required report
    - b. Used by more than one State or by WO
    - c. Data is subordinate information needed to obtain required information
    - d. Data needed to document legal transactions required to support BLM's mission
- E. Ownership could probably be addressed better as who is accountable
  - 1. Who is accountable for:
    - a. Establishing data standards
    - b. Collection procedures
    - c. Establishing data elements
    - d. Establishing quality control
    - e. Security procedures
    - f. Initial data entry
    - g. Data maintenance
    - h. Identifying and establishing data needs
    - i. Identifying data which needs to be automated
    - j. Developing data base systems/applications
    - k. Data base system management
  - 2. I maintain that for the majority of the items, the WO is the principal one accountable
    - a. They set policy
    - b. They set procedures through manual documentation
    - c. They create the need for the data
    - d. Therefore, WO will create the data management guidance, procedures, quality standards, data standards, along with accountability
  - 3. The State Offices will be responsible for implementing the policies, procedures, and guidance, including standards and quality control practices developed by the WO
  - 4. Control will occur through the normal Bureau processes such as the evaluation process and will be the responsibility of each program office, as is the case now
  - 5. The Service Center will be the principal technical staff advisor for the WO and the State Offices, but will not develop policy or procedures independently
- F. How many have really considered the changes in management procedure and policy that data management will create
- G. Data management and data standards will reduce independent action
- H. One office can no longer develop its own unique way of coding data to meet just its own needs or sense of innovation
- I. We will have to act as one voice, one agency

- A. The authority and responsibility for management of data at the Service Center come from one of three sources - Bureau Manual, Annual Work Plan and formal or informal instructions from the WO
  - 1. Manuals
    - a. 1200 Manual
      - (1) 1216 and 1260 sections provide the primary direction for the Service Center
        - (a) SC personnel have no general line responsibility but may be delegated certain authorities in specific program areas. Primarily, SC provides technical and administrative support for certain designated services to State offices
        - (b) Manuals establish program coding standards, enforces standards and helps states achieve compliance
        - (c) Manuals delegate responsibility for system implementation of the data policy changes, including the logical data model and data element dictionary impacts, feasibility and benefit/cost
        - (d) SC responsible for overall management of the Bureau's DED and logical data model
- B. Data Ownership
  - 1. Data ownership is inaccurate terminology. It should be changed to one of responsibility for or management of data. The data or information belongs to the people of the United States, or the Bureau - not individual Bureau employees or offices. The information in our file system is in the care of a clerk or data manager until the file is assigned to a Bureau employee or office for action. At that time the information belongs to the users and is in their possession for doing additions, changes or deletions.
  - 2. For many systems (Financial Management, Data Element Dictionary, etc.) the data is shared by many offices throughout the Bureau.
  - 3. In some systems such as an extensive forestry inventory, where several offices participated in data collection, the data is presently held in the SC where the SC serves as custodian.
  - 4. Some systems have the primary data collection points in the field with the final collection and billing data being transferred to the SC for action (GABS, etc.).
  - 5. Case recordation system is using two methods for data input, but the final resting place and custodial responsibility rests with the SC.

- C. Comments on data ownership from other SC staff members
1. Ownership may be characterized by control or possession, i.e., the ability to add, delete, change or modify data in the information set.
  2. The data belongs to the field offices.
  3. The ability to authorize others to use the data constitutes ownership.
  4. The data owner is that individual (manager or representative) who has the responsibility for making and communicating judgments and decisions on behalf of the Bureau with regard to the use, identification, classification and protection of a specific information asset.
  5. SC ownership depends on the guidance for a particular project. It doesn't own data but its responsibility lies in the area of oversight, management, backup, training and some data entry.
  6. SC is the primary custodian of data, either actively, passively or involuntarily.

#### FURTHER READINGS

BLM management is addressed in the "Audubon Wildlife Report 1987" (1987), edited by Rogert L. DiSilvestro, William J. Chandler and Katherine Barton.

BLM history is addressed in "Opportunity and Challenge" by James Muhn and Hanson R. Stuart.

#### BLM Manuals

- 1211 - Headquarters Office
- 1212 - State, District and Resource Area Offices
- 1216 - Service Center
- 1260 - Automated Data Processing  
This area of the Manual has the Life Cycle Handbooks Levels II through V (Bureau to Utility)
- 1262 - Standards

Data ownership and classification are explained in "Data Classification and Ownership - The IBM Approach", December 1987, Datapro Research Corporation, Delran, New Jersey 08075, pages IS15-325-201 to IS15-325-214 (Datapro Research Company, Phone 800-328-2776) or "Good Security Practices for Information Ownership and Classification", copyright 1986 by International Business Machines Corporation.

The article, "How an Organization's Rites Reveal its Culture", presents a method to gain an insight into the nature of an organization.

## Other Acts

- Privacy Act
- Computer Security Act
- Federal Records Act

## John Kwiatkowski

- A. Data is used to make decisions. It is a resource, it doesn't make decisions. It is a shared responsibility; there is no ownership, which is probably a misnomer. The issue is not who owns the data but where the responsibility for the data lies within State Offices. The responsibility is something that is shared on/with existing delegations of responsibility.
  - 1. If the data is on paper, there is no question of who has responsibility. Why is it a question when the very same data is recorded electronically? It seems everyone wants a piece of the action if the information is going to be computerized.
  - 2. It should be fairly easy to determine where the responsibility lies by going to the Manuals regarding WO 1212 organizational manual (1987).
    - a. There is no guidance relative to data administration, LIS, GIS, information systems and Bureauwide standards. Four responsibilities of the State Office are:
      - (1) Policy and program guidance
      - (2) Facilitation
      - (3) Communication
      - (4) Monitoring and Evaluation
- B. As stated above, the State Office responsibility includes:
  - 1. Policy program direction with no guidance on data administration
  - 2. Coordinate and facilitate program objectives to achieve mission goals
    - a. Coordinate
    - b. Provide procedural guidance, technical assistance and training
    - c. Coordinate AWP/Budget strategies, prioritize workloads and ensure development of hardware/systems and availability of data to make the system work dovetail
    - d. Provide operational scarce skills support to District and Resource Area offices
    - e. Provide centralized support services
  - 3. Guidance on communication
    - a. Coordinate with Federal, State and other entities which are affected by public land management data, i.e. FS, SCS, etc.
    - b. Warn WO, DO and RA offices about sensitive issues.

4. Monitoring and Evaluation
  - a. Awareness of changing of priorities and needs
  - b. Periodic evaluations are necessary
- C. All of the above must be dovetailed into system development, data development so that almost simultaneously they will be ready in 1993 for the target system.
- D. Montana State Office Manual Supplement 1212
  1. Interpret WO policy for statewide needs/application, analyzation, development and recommend policy in the absence of guidance.
  2. Program priorities within and among the programs.
  3. Technical and procedural guidance.
  4. Evaluate program effectiveness through periodic analysis.
  5. Identify and provide training.
  6. AWP and long range program directive recommendations on allocation of funds and personnel.
- E. Managers and supervisors must be capable at all levels to intelligently question computer applications presently in use and those proposed.
  1. How does it meet Bureau needs?
  2. Is a new application necessary?
  3. Is it the most efficient procedure?
  4. Does it make sense to use it?
  5. The standards for its use must be agreed upon.
  6. Managers and supervisor are responsible for ensuring data standards are adhered to.
  7. SO program leaders' role is to evaluate to see if data is inputted and standards are adhered to.
  8. SO managers and supervisors must be concerned with WO dictating development of applications without management acceptance. This has resulted in expensive mistakes that we can ill afford in the future.
  9. Some of the questions that need to be considered are:
    - a. What is collected to what standards?
    - b. When are we to dispose of data?
    - c. What format are we to use, i.e. IHICS?
    - d. Monitor or interpreting data
    - e. New applications for data
    - f. Testing new systems and distribution
    - g. Adequate budget to
      - (1) Purchase, maintain and update system
      - (2) Input data
      - (3) Maintain data bases
    - h. Secondary users
      - i. What work needs to be done on the system
      - j. Standard setting of data themes
      - k. Determine level of information needed
      - l. Priority setting for data input; where do we begin

- m. Who is maintaining information on what data is being collected and input to the system
- n. Is the system supporting resource users or are the users supporting the system
- o. Are WO and SC establishing a level of information higher than what is needed? Do not forget that someone has to input the data and maintain it
- p. Gather only the data that is needed to ensure proper allocation of resources and making decisions
- q. Would like to think that the SO has some input and control over the target system
- r. Don't stifle the field with lots of don't's
- s. SO is just groping with the modernization effort
- t. How do we establish corporate data for states to ensure that District and Resource Areas are inputting the data that is necessary
- u. Need to assure the system meets management needs and is not designed to be given more data than is necessary
- v. Gather data in the right areas, i.e. priority for inputting data is in an area that has issues to be answered by data
- w. Help in distribution of new applications
- x. Role classification problem; where in the SO should these functions be located

F. Conclusion

- 1. Responsibility for SO is clear in WO Manual 1212 and it probably doesn't need to be modified for LIS/GIS
- 2. What isn't clear is who does what in the SO on the LIS/GIS modernization effort in the future
- 3. Many of the roles of the Data Administrator may be done by the program leader in the future

Terry Plummer

- A. Ownership is an improper term. Data is shared not owned.
- B. If data is owned at the lowest level - RA; then can someone tell us how to standardize it. Given the past history of the Bureau on matters of less stature, will that work in the BLM?
- C. The modernization effort is a reality. Managers have to support it and begin to use it.
- D. We need to give ourselves a large dose of humility and focus as a sharing group. Allow the RA to "own" data but "share" the standardization of it. This will take an extraordinary effort to make it work.

John Singlaub

- A. The concept of a centralized system in a decentralized agency is an extremely contradictory statement.
- B. When data is on paper, the Resource Area has control of the data. It may be "ratty" information but is owned at the RA and, when presented to someone, it is presented in a "cleaned up" format. If the information is on a computer with access from all over, it has to be stored in the "desk" (computer) in the proper format - it can no longer be the "ratty" information.
- C. Data may NOT exist in some form in some place.
- D. RA always maintain the data is not good enough.
- E. Computer people always say ALL the data is in the system.
- F. Managers do not want all the data, just enough for a decision.
- G. There is a responsibility for data ownership.
  - 1. Accuracy is one of the more important responsibilities.

There was a question/answer period with all panel members entering into the questions from the members of the audience.

Steve Wing  
Meta Data

INTRODUCTION  
TO  
THE WONDERFUL WORLD  
OF

M E T A   D A T A

As the Bureau proceeds to automate various elements of its being, there are invariably some aspects of its information management which should have been considered yesterday. It has been said that the issue of data applications and data structures/relationships is a major obstacle to the implementation of the LIS.

The Bureau must recognize that the key to the proper and required identification of its data is to recognize/identify the organizational structure under an automated system, the management identified data for decisions, and the automated system capability and design requirements for efficiency and equitability.

It was written over 2500 years ago that:

Water shapes its course according to the nature of the ground over which it flows; the soldier works out his victory in relation to the foe whom he is facing.

So we as Bureau Data Administrators must understand not only our role, but what we are tasked to do, the organization we are serving, and the organizational/technological tools we have at our command to accomplish data administration in the Bureau. And, finally, just what META Data is.

### Automation and Organization

As the Bureau begins to decentralize its work force through automation, we must begin to manage the recentralization of our information and operations. This will allow the systems to be more responsive as the automated technology enables decentralization to occur. We are now beginning to realize that we need a disciplined organization if we are going to meet our timetables for the target system. We also need to find the organizational structure which will allow us to efficiently manage the public resources.

#### FACT

When we mention centralization or decentralization, immediate responses are given, sides form, and challenges hurled. Energy is wasted. What we need to consider is the type of mix to get the job done quickly and equitably. While some of our personnel will continually try to put every action in a black or white category, be prepared to deal with an increase in gray areas.

#### FACT

The two trends of centralization/decentralization do not have to be in conflict with our IRM organization. The IRM style we require does not now follow the organizational needs, as minicomputers are placed in the field where some have decentralized applications/developments and operational systems. Our IRM has no choice but to follow the organization. There is a critical need for an overall IRM architecture to centralize control over all purchases and directions. We must replace the old IRM stigma - lack of responsiveness.

#### FACT

Management is now realizing the value of placing "automation beasts" or "techni-weanies" in close proximity to them with the decentralized capability. The benefits to line managers are too great, even though the challenges through the future will increase in managing an automated office.

#### FACT

We now lack the discipline to track our automation efforts. We lack a plan which guides us through an automation effort. We must recognize that automation is a technology, that it serves us as users, and that there is no magic. We should recognize that the wide focus we require to complete the data integration may cause us to think of centralizing some functions, decentralizing others.

## STANDARDS

### SITUATION

The identification of standards is a difficult task, and could be a major obstacle. About six years ago, the Bureau held the first GIS Coordinators Workshop. New Mexico offered a document which identified standards of capture, analysis and display. To our cost, the standards that were offered were vetoed in favor of separate state data bases. Our provincialism has cost us much valuable time in coming to grips with the subject of data standardization and administration.

While no Bureau manager dares to openly criticize the notion of standards, not all managers are equally aggressive in promoting standards work. Those states that have built large data bases over the the years have understandably been the slowest to assume high-profile roles in the various automation workgroups. Why, after all, should these managers be enthusiastic about helping other states and even the Bureau when their work is satisfying their needs? Why should they open themselves to an unwelcome workload in possibly recoding their data to another standard? This situation applies to other agencies as well. Why should another agency allow a "competing" agency to gain access to their carefully cultivated user data bases? But the call for "open systems" is now being made by the public, Congress and others who need the data. These Bureau states and other agencies can no longer afford to ignore the cries.

### STRATEGY

We must also be aware of a common response from the "standards" community that there will be an aggressive move to achieve a consensus on a standards environment definition. Then, using this definition, each state/agency would like to see to it that as much of the standard environment as possible can be built atop its proprietary base (which the state/agency must support in the interest of backward compatibility). Alliances are likely to develop very quickly. We must study states/agencies historic position on standards efforts. We must think about the strategy that would be most appropriate for differentiating our data needs.

The ideal for these states/agencies would be to implement standards within the context of an existing proprietary architecture. This way, the attributes of the proprietary environment can be promoted innocuously enough as "added value", but the effect will be to lock users into the proprietary technology or diminish a system capability in efficiency.

The trend is to use the word data, standards, integration, distributed, all in one breath. Data standardization will cause a major change in policies and procedures, generate a need for a broad understanding and the qualified personnel to carry this through the years and keep it on track. Strong management commitment to develop and implement standards is critical to successful completion of LIS.

## ENFORCEMENT

Even after the best standards are developed, should no one use them, they are basically useless. Enforcement is the key; this is where the Data Administrator reviews, approves and possibly implements some of the changes (data base field changes). There is a valid case for creating a Czar in the enterprise of organization-wide automation to have central-processing and despotic control over data to push the Bureau through the massive organizational and data administration controls needed. We need to pay attention to the strategic use of technology.

## DEFINITION

Standardization is inventorying and describing our data. It is becoming critical in spatial data because it will provide such information as projection, scale, data and source. In our traditional data, it will describe data files, sources of information, accuracy indications and much more. This effort, as it unfolds or develops, will become the backbone of our information management process.

## BENEFITS

Data standardization allows for standards to:

- tap into an ample supply of trained "computer talent" as new systems are built and operated (standards minimize the need to retrain existing staff);

- enhance existing software confident that current development and execution environments will remain consistent and stable;

- end dependencies on particular vendors developed to embedded application investments (the result of this is that consumers can afford to focus exclusively on price/function/performance considerations, leading to increased competition in the marketplace).

Consistency in the application environment, across a single vendor's product line, as well as those that come from a number of vendors, further ensures that cross-market platforms (can happen) without need to invest in an excessive amount of redevelopment time or expense.

## TASK

We must define the integrity of a data file, data base, theme, source (i.e. truth in labeling) as it relates to the utility of the proposed application. We have identified a Spatial-Cartographic Standards Team. This Team will address national and international standards, National Digital Cartographic Data Standards, and design map standards for publications established by the printing study.

We have created a process to identify the corporate data for the Bureau. Data Set Teams are being created to collect this first round of data. There will be many opportunities for delay as the resources community responds to this task. This effort will be several years in the first generation, with subsequent dynamic updating efforts.

## PROCESS

Data oriented standards have:

- Field, record, file and table naming conventions;
- Data base name and other data base relationships, naming conventions;
- System and subsystem naming conventions;
- Report, online, and process program naming conventions;
- Standards abbreviations.

After the standards are set, the relationships must be connected. The documents are created which show the relationships of all entities. Data base diagrams are developed. An inventory of all programs (modules) is taken.

Inventory and classification procedures may be the main thoughts when automation is considered. Others immediately refer to the accuracy and information content; while others belabor the specific pieces of information and how they relate. Hopefully, the resultant communication is expanded beyond its normal "line of sight" confinement. The babel of groups not previously allied may threaten to topple an automation effort. In the Bureau, the major area of discussion now tends to be identified with what we have traditionally and fondly referred to as "resources".

The resource data has been developing a commonality of description through its discipline. These "standards" have applications in the following areas:

Attribute (coding) standards: This critical area involves linking to existing and potential data structures. The element definitions include identified standards and reside in a data dictionary.

Spatial Accuracy: The precision of the coordinates locating information on the earth which are either + or - from its theoretical true location.

Level of Detail: A broad approach would result in fewer categories, less information and less detail than a higher level classification. This term may be synonymous with spatial accuracy.

Some geographic areas may require more detail than others. Others may be limited through a higher cost of more detailed information. Stratification of data could occur through varying levels of detail.

Cartographic Standards: Drafting specifications can be shown as defined by spatial data. These include shadings, line types and symbology, as well as others depending on the display requirements.

Classification Standards: Some resource disciplines have addressed classifications. These classifications may vary from agency or organization to the next.

Overlay (Theme) Content: The content of these themes or maps should be consistent from one area to the next. A desert tortoise map should be the same in Arizona, California and Utah when displaying information.

**Naming Conventions:** There should be a consistent and systematic naming of maps and themes. These, when standardized, allow data to be retrieved easily and the various software to efficiently store the information.

**Data Documentation Requirements:** Each file or record as it is created, changed, modified, combined and converted from other systems should have the capability to keep this information through time. This information could include original source scale, accuracy statements, inventory level/level of detail, name of originator (person, agency), data transfer technique (photo to map), digitizing technique (table, scan, analytical stereoplotter), and statements on use of the data (sensitive, proprietary, public).

### CENTRAL/DECENTRAL

As automation is introduced, decentralization rears its two-faced head in the proliferation of development efforts. It is driven commonly by standardization as different areas are brought together. We are now looking at the high number of data bases which the target system is expected to support. This will make anyone paranoid, as all are addressed in a systems design.

As the organization moves toward decentralization, spending increases. This increase is the result of duplication of staffs and effort. Centralization can be dramatic in savings. We must make a distinction between what everyone used to call centralization - the gathering up of technology and personnel under one IRM staff - and the new era of centralization, in which information is sucked up and processed centrally.

As the Bureau begins to decentralize people, the IRM organization must manage recentralization of information and operations. Our organization studies may try to create neat boxes and role/function flow charts. These cannot dictate the shape of the IRM role/function. What is the overriding condition is that the Bureau must identify the discipline required to function and react. It also must recognize there is no question that a well-managed centralized approach is more efficient, but it is crucial to create synergy with the rest of the organization. Decentralization increases responsiveness, smaller units work better (proximity) and desired synergy is created.

### DATA DICTIONARY

#### DEFINITION

A Data Dictionary is the best insurance policy to make the Bureau system function correctly, efficiently and equitably. We must never diminish the fact that the most important aspect is the Bureau data - corporate or local.

We are experiencing that our systems are growing faster and larger than expected and our data has become unmanageable. Our data relationships are now a mess, especially in the "resources" programs. We are experiencing problems in the maintenance of the systems and receiving heavy pressure for addition of new systems. The situation now exists where data integrity is lost, data redundancy proliferates and data inconsistencies abound.

## DATA DICTIONARY

We have, in the Bureau, through the modernization effort, the opportunity to gain control of the corporate information system. The data dictionary can have a major impact on the software development.

## STRATEGY

The Bureau must recognize, as evidenced by the present situation with limited use of the dictionary, that end users will simply circumvent the organization if they encounter the same IRM mentality of a few years back. Our data administration efforts must be a true service entity, online and interactive with the users. The IRM and data administrators must aggressively participate in the productivity and management issues of the Bureau.

There exists in the resources programs poorly defined standards for current dictionary usage. We must not let lack of a standard result in a tunnel vision for the data dictionary developers. If a tunnel vision were allowed to develop, the products would answer the immediate problems of data base design but fail to offer the scope required to be reactive to the field users. Should the users fail to benefit from the dictionary products, their support and subsequent updating of the dictionary will be diminished, to decrease the utility would then dissolve the strength of the system. The data must be timely. Data dictionary usage will increase in the area of decentralized operations where a distributed data base is needed.

A data dictionary has been discussed for many years as a potential solution. The Bureau developed one, but lacked the leadership to implement it. Since then, with the proliferation of personal computers, many small data bases have been created. The sad thing is that very limited correlation was made with the existing data dictionary, and the dynamic responsiveness of a dictionary was lost.

## META DATA

A term which describes the relationship of the information in a dictionary, or information about information is called Meta Data. The dictionary is a data base that uses a method to describe the source, relationships, use, edit criteria, control, user responsibility and content of data within an organization.

## HISTORY

First data dictionaries consisted of one paper per data element. Maintenance was found to be time-consuming, and many failed to document relationships between the elements and applications. Data Base Management Systems (DBMS) allowed the relationships and hierarchy to be constructed, to be automated and provided a more integrated data dictionary with the relationships between the applications. To be effective, the data dictionary should be used in all phases of systems development, not just the data design (user and technical design, detail design, code and test, systems test and conversion and maintenance).

User and technical design phase - data base physical and logical design and file layouts should be developed. All report, screen and processing requirements should be specified. Interrelationships between current data entities and new data entities, as well as other relationships, should be identified and documented in the dictionary.

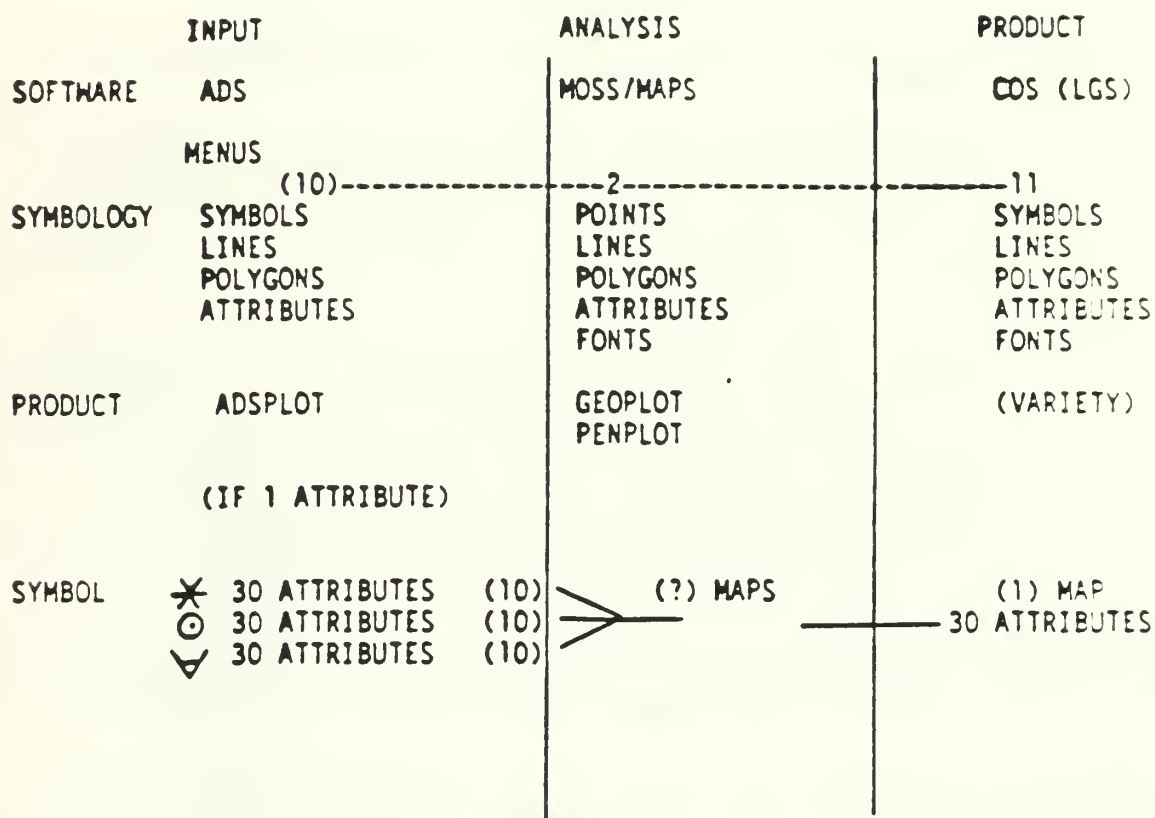
Detail design phase - Detailed specifications of each program are developed. The design is finalized. Data dictionary is updated. New applications will be integrated into the data dictionary. This will make it easy to visualize potential bottlenecks with data base structures before coding begins. It allows the design for only one pass of the database.

Code and test phase - This phase allows the awareness of how applications integrate with current and new files, data bases and other aspects of the applications. If a change is required, then a quick check of relationships can be done. Impacts can be assessed.

Systems test and conversion phase - This phase tests integration of the parts and with existing applications. All extra work to keep data dictionary accurate will be well worth it. Implementation of the conversions will be easier and it will tell what other subsystems are affected.

Maintenance phase - Maintenance is difficult if the identification of the simple change is difficult. Identification of all relationships among all subsystems can be done, as well as assisting in the maintenance process. An automated data dictionary is easier to update and change.

# SPATIAL DATA



## Afternoon Meeting - January 11, 1989

A continuation of the meeting from the previous evening was held, beginning about 3:30 p.m.

A. A general discussion was held and two alternatives were presented and discussed.

1. Data set teams were to go through the existing information (DED and stand alone systems) to determine corporate data elements. The team could do an inventory if they deemed it necessary. Following the determination of corporate data, a review would be sent to the SODAs for review by the program leaders and whomever they deemed necessary.
2. Data set teams were to go through the existing information (DED and stand alone systems) to determine corporate data elements and, in addition, go to selected states for an inventory of new data elements that may not be in the DED and stand alone systems, but are necessary for information. This will then be run through the SODAs for review by the program leaders, etc. Guidance would be given that states selected for inventory be those other than what is represented on the Data set team.

The Bureau Data Administrator selected Alternative 2 as the inventory process we would follow. She said she would provide guidance for continuing the inventory process with the least amount of interruption.

Some SODAs were not happy with the alternative selected and complained to their Associate State Directors. An ad hoc Field Committee Meeting was held to resolve the issue. The results of that session will be conveyed to the SODAs following the February 14-15 Field Committee Meeting.

### Data Accuracy and Quality

Mike Dwyer

A. Data Cleanup

1. Team of core people from all over the New Mexico BLM
2. Took 17,000 ALMRS case files and went through them, one by one
3. Took over a year of time with many employees (April 1, 1987 - June 88; 8 people)
4. Done out of State base funds
5. Got rid of 120 cubic feet of case files
6. Users would not use files until they were cleaned up; then everyone began to use them and there were no more complaints

7. Did an experience report on project; it is available
8. Microfilm effort
  - a. Needed to reduce paper flow; did it by use of microfiche
  - b. Filmed files; gave them to MMS and FS as well as DO and RA files
  - c. Now expanding that into leasable minerals and other areas
- B. They keep a META file on all their data in each Resource Area, describing the data on file. Tells scale, date, etc. and describes the data

#### Frank Splendoria

- A. Had the responsibility to develop the Status Contract
- B. Things that can be applied generically to contracts being developed
  1. Took a long time to develop Statement of Work
    - a. Need to know how the end product will be used
  2. Identify how the contract would be inspected
    - a. Statement of Work may lead into developing an inspection procedure, or design the Statement of Work to facilitate the inspection of the contract
  3. SC developed a throw-away contract prior to getting a contractor so they could get a better contractor
  4. Bounced ideas off other people doing similar contracting
    - a. Really helps
    - b. Play off different scenarios
    - c. Plan for extremes if you can
  5. People on the staff will do the work, so take care of them to get things done that need to be done
- C. Coding brought in the information resources people in the office
- D. Have to get management commitment and coordination
- E. Communication Links
  1. All were in the same place in the SO
  2. This facilitated communication
  3. Could talk about questions very easily, right now
- F. Contractor
  1. Be careful
  2. COAR with formal communication channels between you and contractor
    - a. Informal Aspects
      - (1) Develop a rapport so if a problem comes up, they will feel free to talk about the product or problem so the product is completed quickly
  3. Don't take any gratuities - lunch or anything
  4. Information is not information until it is shared

5. SC is another part of the loop and rapport must also be developed with them
6. SC does not talk directly with the contractor
7. Has to be someone on staff (one person) to talk to the contractor to make sure that only the right information gets to the contractor
8. Documentation must be done with discretion and clarity
9. Look into the future of what might happen so there are no surprises
10. SC provides training and support - be sure it is used
11. Staff must be disciplined
12. Seek people in the organization for advice
13. Be flexible so changes are not so damaging

### Data Modeling

Mike Thompson

- A. June - Alaska did some modeling
- B. Oracle decided to go to Oracle as part of the data base system for modeling
  1. United Kingdom Oracle for modeling
  2. Should know the data model and how it is used and what it is used for
    - a. Look at all the data and how they are related
    - b. Need a business plan
      - (1) Takes the high level of how we do business
      - (2) Takes the how do you do this and with whom do you interface
  3. Modeling
    - a. The business plan
    - b. The conceptual/logical data model
    - c. Physical data design
  4. Base building blocks (lands and minerals data base)
    - a. Funnel all data into the logical data model at the corporate data model; identify all the relationships so that integrated data base that has been promised to the Bureau
      - (1) first draft is done
      - (2) hasn't been reviewed or cross-walked with Alaska
  5. Logical Data Model
    - a. DA's management tool
    - b. Describes relationships from a user's standpoint
    - c. Identifies data integrity
    - d. Identified data conversion requirements
    - e. Used to evaluate data modification impacts before changes are made
    - f. Ensure a degree of ad hoc use capability
    - g. Interactive with DBMS including interface to physical data base design and data dictionary

### C. Oracle Model

#### 1. Definitions

- a. Entity - something of interest to the organization about which data is maintained
- b. Attribute - a characteristic of an entity
- c. Key Attribute - an attribute which, when in conjunction with other key attributes for that entity, uniquely identifies an occurrence of the entity
- d. Mandatory Attribute - in addition to key attribute, any attribute which must exist for every occurrence of an attribute
- e. Entity subtype - a variation of an entity
- f. Entity supertype - that part of an entity definition which contains those components which are common to all entity subtypes

#### 2. List of figures which identify relationships to each other

- a. Solid line is one to one relationship
- b. Crow's foot means there are one too many entities related to that line
- c. Undashed line is a mandatory line between entities
- d. Dashed line is an optional relationship
- e. Close parentheses exclusive of two or more relationships
- f. Dashed close parenthesis is inclusive of two or more relationships

### D. Naming Conventions

- 1. Entity definitions
- 2. Attribute definitions
- 3. Entity definition

### E. Data Conversions Requirements

- 1. Data attributes/elements conversion requirements are derived from LDM comparisons to current and interim data needs
- 2. Data conversion planning
  - a. Master plan, July 88, micro plans
  - b. Interim software development (Alaska)
- 3. What about FMS linkage Alaska use of action codes

### F. User who build it and users who use it

Brenda Moeller

Dave Schaefer (Views of Data in the Bureau)

- A. All the data we collect are related to the resources we manage.
- B. The further away from baseline resource data the data becomes, the less it looks like the baseline resource data (Figure 1 in Dave's handout).
  - 1. The next highest level in the Bureau requires a summarization of data from a lower level.

- C. It would be desirable to have consistent summaries of the data at various levels to answer questions that commonly occur at that level and need data from a lower level.
  - 1. Suggested elements of Management Summaries

Janis VanWhhe

- A. Field Committee Meeting
  - 1. Size of workload in inventory step as presented in training last month
  - 2. Eliminate the inventory step in one way or another
  - 3. Get to SODAs and Data Set Team Leads
  - 4. John will make a decision and tell us first thing in the morning
- B. Changes will be made to the Manual by the WO.

## **MSC WORKGROUP AGENDA**



MAPPING SCIENCES WORKSHOP  
Phoenix, Arizona  
January 9-11, 1989

Monday - 3:00 p.m.

1. Introduction and review of Workshop agenda and objectives (Tabb and Meier)
2. FY 91 budget briefing - for Mapping Science Workshop plus for entire group later in week (Keating)

Tuesday - 1:00 p.m.

1. Discussion of the status, progress and the involvement of Mapping Science personnel concerning Base Mapping Standards. Topics included are:
  - a. data standards (accuracy)
  - b. relationship with the data element dictionary
  - c. common data structure (export)
  - d. attribute working (includes objective of the Cartographic Standards Team (VanWyhe)
2. Status of cyclic aerial photography plan (Batson)
3. Status of symbolism review and standards development (Sigafos)

Wednesday - 1:00 p.m.

1. Bureau mapping product standards development (Tabb)
2. Analysis of Mapping Sciences issues to develop primary program emphasis for next two years (Tabb)
3. General Program Review (Meier)

## 1989 Mapping Workshop

Topic: Portrayal of Map Data (100K)

Lead: Nina Madry IDSO

| State | P.O.C.          | Theme                                     |
|-------|-----------------|-------------------------------------------|
| AK    |                 |                                           |
| AZ    | Larry Taddia    |                                           |
| CA    |                 |                                           |
| CO    | Richard Arnold  | Administrative Areas                      |
| ID    | Nina Madry      | Cultural (all) including recreation       |
| MT    | Chuck Sigafoos  |                                           |
| NV    | Steve Rasmussen | PLSS                                      |
| NM    | Candace Bogart  |                                           |
| OR    | Ted Albert      | Hydrography                               |
| UT    | Art Martinez    |                                           |
| WY    | Pat Madigan     | Roads/Transportation<br>Collar and Legend |
| DSC   | John Green      | Topography & QC                           |
| WO    | Dave Meier      |                                           |

### Timelines

|                          |                 |
|--------------------------|-----------------|
| User requirements to DSC | July 1, 1988    |
| Color proof prepared     | August 1, 1988  |
| Field review complete    | January 1, 1990 |

**Each layer will be reviewed and coordinated by the State Office Point of Contact (P.O.C). Each layer will be accompanied by a report describing the process for collecting and assembling the data. A separate report will be prepared by the DSC describing the processes and checks necessary to ensure Quality Control.**

## 1989 Mapping Workshop

### Topic: Cyclic Photography Issues

Lead: Fred Batson (SC-677)

#### 1. Status of Draft Plan

State identified requirements are incorporated into the Mapping Sciences/LIS strategy document. Target for implementation is FY 91.

#### 2. Schedule for Update

Its likely that decision on plan will occur by mid-summer. If approved, plan must be finalized and fully coordinated with other agencies, especially U.S. Forest Service, prior to FY 91.

#### 3. Revised Photo Specifications

Service Center Branch of Remote Sensing is currently revising the entire aerial photo specification package. States will be asked to review within the next 60 days.

#### 4. Contract Administration

A discussion concerning administration of photo contracts was held. Most States raised concerns about the impacts that could result from a larger contract administration workload. The role of centralized SC support was discussed. It is recognized that this topic will require careful analysis if a cyclic plan is implemented. SC is prepared to offer training to States concerning contract administration.

### Topic: Local Image Processing Requirements

Lead: Fred Batson (SC-677)

Several State remote sensing coordinators have indicated their views that the Bureau should start a transition from a total reliance on the Service Center's digital image analysis capability to a more local capability over the next several years. In order to assess the requirements for a local (State-based) image processing capability, an informal questionnaire was distributed to workshop participants. The purposes of the questionnaire are to: 1) assess the anticipated applications, 2) identify the degree of support for this transition, and 3) describe the functional requirements of a local system. Responses to SC-677 were requested by 1/25/89. Based on the results of this preliminary, short-term assessment, further activities will be undertaken. State coordinators will be informed of the results of the preliminary analysis.

MAPPING SCIENCE DECISIONS TO BE PRESENTED TO THE BLM FIELD  
COMMITTEE DURING THE WEEK OF FEBRUARY 13, 1989 AT PHOENIX, ARIZONA

These decision points are key to the implementation of the BLM LIS. These decision points are a result of the mapping science strategy team made up of BLM field office personnel, BLM Service Center personnel, and supported by the Washington Office.

**DECISION POINTS:**

**A. Bureauwide LIS Resource Base Data Initiative (FY 91-95).**

- This decision includes a one-time funding strategy.
- The BLM LIS Resource Base Data includes the digitizing of the terrain, transportation, hydrography, and culture (man-made) features. These layers of data are common to most BLM resource programs and are the data sets most likely to be duplicated by several independent field collection efforts. Standardized data collection/conversion will eliminate duplication and result in significant savings to the BLM.
- Total cost approximately 25 million over the five years or about \$5 million per year.
- This is a Concept Decision. Workshare/cost-share for the LIS Resource Base Data will involve other agencies. This will include end product exchanges between BLM/GS (e.g., DLG and BLM LIS Base Data exchanges). This is a BLM VALUE-ADDED effort.

**B. Resource Imagery.**

- Continuation of BLM's participation in the National Aerial Photography Program (NAPP). This is a medium altitude aerial photography program and will be a cost effective aerial photography source for the BLM's Eastern State Office (ESO). The ESO will NOT participate in BLM's Cyclic Aerial Photography Program. It will further provide the source data for outlying areas and will serve as a source for more cost effective updates for lower interest areas.
- Initiation of BLM's Cyclic Aerial Photography Program beginning with FY 1991. This is an 8-10 year cyclic program. This Decision costs \$1.5 million per year and is based and supported on a Bureauwide identified requirement.
- Enhanced full utilization of satellite data within LIS (interim and target) for ARD use at the field level (the users).

**C. BLM Mapping Science's Program Budget Strategy beginning with FY 1991.**

- Move allocated funding to the States.
- BLM SC funding adjustments to meet the BLM's LIS requirements.

## OTHER

Another set of important Mapping Science program decisions was made during the week of February 9 at the LIS meeting. These were:

1. BLM will remove itself from the existing jointly developed BLM/BR DM 376. BLM has notified the Department of BLM's intentions, and the reasons for doing so. The Department has approved BLM intentions and the BLM Service Center has contacted the Bureau of Reclamation in Denver.
2. ERDAS workstations at the BLM SC will serve to back up the existing image processing computer through FY 1989 since the system is nearly 10 years old. ERDAS is NOT a replacement for the HP/IDIMS. Requirements for local image processing will be identified.
3. SC-344 and SC-677 will staff-out whether POSIX on a PRIME computer can serve the operational SC remote sensing requirements and the BLM's LIS needs and requirements. This will be staffed out before the end of FY 1989 and will include LIS software testing requirements.
  - Evaluations
  - Preparation of Department justifications
  - Procurement before the end of FY 1989 if funds are available
4. SC-677 will assist New Mexico in acquiring ERDAS capability. SC-677 will determine if units are available on USGS contracts.
5. SC-344 with assistance from TGS and NM will document the requirements for the interface of ERDAS to GIS during FY 1989.
6. SC-344 will lead with support from SC-677, 670, 676, and SOs to expand the Mapping Science strategy for the BLM migration of remote sensing and photogrammetry into the BLM Target System. This entails developing the institutional knowledge, commitments, and technology transfers for the migration of local imaging processing capabilities through the interim timeframe and into the Target System.

### 1989 Mapping Workshop

Topic: Spatial Cartographics Team

Lead: Mike Hutt (DSC) Chuck Sigafoos (MTSO)

Instruction Memorandum 89-178 was the basis for discussions which resulted in work assignments as follows:

**Printing:** Chuck Sigafoos will have the lead responsibility for developing Bureauwide printing standards for cartographic products. It will include such things as standard symbology, color, etc.

**META-Data:** Steve Wing and Bruce Keating will have the lead responsibility for defining the standards for "truth-in-labeling".

Graphics Input: Carla Garrison (UTSO) and Bill Yeager (IDSO) will have the lead responsibility for the attributes and labels standards that will ensure the transfer of this data into the Bureau LIS and its transport to other systems. This area will deal also with the specific data capture requirements such as special notes (value added) data necessary for resource management.

Graphics Output: Ted Albert (ORSO) and Chuch Sigafoos (MTSO) have the lead responsibility for consolidating the bureauwide data symbology.

Coordination: Mike Hutt (DSC) will coordinate the overall effort and has a meeting scheduled tentatively for the week of March 6.

Considerable progress was made in this area since all States were present to provide input to the standardization process. It was therefore possible to eliminate the meeting previously scheduled for the week of January 16. This is a significant task but one that will help ensure the consistency of cartographic data in the manual or automated mode as well as help define the parameters of data elements and attribute coding for resource data.

MAPPING SCIENCES WORKSHOP  
1989  
MEGA-MEETING, PHOENIX JAN. 9-13, 1989

In addition to the subjects covered within the previous pages the Workshop served as the key information exchange for cartography, photogrammetry, aerial photography, image acquisition and analysis, and other closely related activities such as GIS. Presentations were made by the WO data Administrator and the WO ALMRS program office. Considerable discussion was held regarding the new program areas, principally the 4540 activity since it by definition it emphasizes data which often is collected by mapping science personnel i.e. cartographers, photogrammetrists, remote sensing specialists, draftsmen, geographers, etc./end

Reflections on the MEGA Meeting Dinner Speeches

Mike Dwyer

New Mexico State Office

Resource people spending their time also maps for a meeting  
rather than doing analogous work to present the picture of  
what is going on more accurately

## Reflections on the "Mega-meeting" Dinner Speeches

Mike Dwyer  
New Mexico LIS Project Manager

### Introduction

During the week of January 9-13, the BLM convened a meeting of over 200 Bureau employees\* with varying interests in the Bureau's Land Information System (LIS). The week of speeches, meetings and after-hours discussions came to be known as the "Mega-Meeting". On the Thursday evening of this week, two Area Managers, Mike Ford and John Singlaub, spoke at the banquet. The speakers were arranged by Lynn Engdahl, Arizona Associate State Director rumored to be a former debate coach. Mike Ford of the Havasu Resource Area in Arizona spoke first.

Mike courageously stood in front of the group of LIS professionals and supporting managers and expressed his lack of confidence in the effort. He suggested the motive of the LIS effort was misguided: centered on making the BLM a leader in the technology rather than focusing on the mission of BLM - resource management. He questioned whether the products of LIS have increased the quality of resource management decisions. He cited the drain of funding for computers that he felt was needed elsewhere. He asked when the system will be in place - a question it seems he cannot get a satisfactory answer to. He suggested that resource specialists want to be out in the field rather than in the office working on computers. He felt the technology has been over-sold. In sum, Mike suggested that we are doing a good job of managing the resources and questioned whether we really need LIS to help accomplish our agency mandate.

John Singlaub, Area Manager in Grand Junction, Colorado followed Mike. The arrangement was that he would rebut the first speech. John did an admirable job as could be done, especially since he faced the difficult task of delivering an extemporaneous argument that justified the jobs of probably 75 percent of the audience and because John agreed with much of what Mike said.\*\* John re-affirmed the need for LIS, citing his personal experiences with Geographic Information Systems as the Piceance Basin Resource Management Plan (RMP) Team Leader and later as an Area Manager.

\*And a few from other agencies

\*\*Just before going on, during the applause for Mike, John leaned over to me and said "And that's reality, man".

The reaction to these two speeches by those attending was profound. For the rest of the evening (which lasted a long time being the last night of the meeting) and during the next day, people would break into discussions about what was said. I noted in myself and sensed in others feelings of subdued frustration. Was Mike right? If the answer is yes, all our hard work and incremental victories go for naught. We have wasted our time - the ultimate sin. Even if Mike is misguided, was Lynn right when he stated in the close-out that probably 70-80 percent of line managers thought to some degree as Mike did? If so we face a long, long uphill climb (good thing we have Ader on our side).

In contemplating these questions, I concluded that we would be wasting a monumental opportunity if we were to let this debate fade into the past without some afterthought, as we can expect the same argument to be repeated hundreds of times before it ceases to be relevant (if that ever happens). Thus, I offer my thoughts, not because John didn't do an adequate job in justifying the system -- I think he did a great job, but because each of us must answer the questions in our own minds - from our own perspectives. To waste that chance is to risk continuing anxiety.

I of course disagree with much of what Mike said. Not only his comments about the system and the need for this technology, but also some more basic issues of what our mission is and how well we do it. At the same time, I sympathize with what Mike and John face in their positions. Both stated that, as Area Managers they have certain goals (stated in their PIPR's) that they must accomplish, among which LIS is generally missing. Both stated that there is no incentive on their parts for supporting implementation of the system at the Resource Area level and that they generally cannot afford to make it happen "on the side". This is a tough position, one that calls for an individual to make personal choices that don't come easily either way. John decided to make it happen regardless, Mike decided no. There is no wrong or right in the personal choice and I have no disagreement here. I don't know enough about the specifics of Mike's situation to criticize this particular exercise of his judgement.

Where I do disagree is with Mike's sole emphasis on resource management as our agency mission, and our record in accomplishing that mission. I also have a lot of concern over the idea that the way we do business now and the resource management decisions we make are good enough, the "it ain't broke so why try to fix it" syndrome. Finally I am deeply concerned about Lynn's comment that Mike's attitude prevails amongst line managers in the Bureau. If this is the case, we are not in good hands, we are in trouble.

## Resource Management as the Bureau Mission

Many of the participants in the mega-meeting wore a lapel pin that was the BLM emblem with three interlocking circles superimposed. The three circles represent the three primary components of LIS: the Automated Land and Mineral Records System (ALMRS); the Geographic Coordinate Data Base (GCDB) of the Public Land Survey System; and, the Automated Resource Data Base (ARD). The three circles were drawn for the first time at what might be called the first mega meeting (attended by about 30) in Santa Fe a few years ago. The "Blue-line and Red Line" demos were also products of this meeting. While the three rings provide a decent symbol for LIS, I think they shine as graphic representation of the Bureau.

The most publicized Bureau function is resource management. So much so that people often forget (or don't realize) that we also are responsible for the Public Land Survey System nationwide and we are a very large title company. The resource management issues are the ones that make the papers. James Clapp, a professor at the University of Wisconsin and current President of the American Congress on Surveying and Mapping once stated in an article that you probably won't see any protesters out in front of the court houses with placards demanding "BETTER LAND RECORDS NOW!". Resource management dominates, but is it any more or less important than our other two responsibilities?

The three responsibilities together form the total mission of the Bureau. We do have some common ground in these functions (as is indicated by the interlocking circles), but they are discrete enough to stand alone. Yes, the rubber meets the road in the resource management function at the resource area, but how about in cadastral survey? In most states it is in the State Office. How about title and records? - State Office. After John's request for a show of hands for each office at the general session, it would have been interesting to ask how many of the State Office people work for either the cadastral survey or title and records "companies" within the Bureau -- these people are where the rubber meets the road.

Given that we have three discreet functions, let us not forget that the LIS is out to serve each. It may not serve each equally, but all three just the same. Mike argued that we didn't necessarily need LIS for resource management -- that everything was fine. I did not hear that argument for title functions or land records management or for Cadastral Surveys - which may account for well over half the use of the system (maybe up to 75%). Mike represented one third of the Bureaus responsibilities and I contend the other two (especially the title company) must have LIS to accomplish

the job at hand and the mission of the agency efficiently and effectively.

### BLM's Record in Resource Management

Mike stated in his talk that we are doing a good job of resource management. He said decisions are no better using LIS than by manual methods. He suggested that we are pursuing the system to be leaders in technology rather than in support of resource management.

I am immediately skeptical of anyone that tells me the status quo is sufficient. I am reminded of a group of quotes I came across a few years ago, among which were these two:

*"Everything that can be invented has been invented"*

Charles H. Duell, 1899

Director of the U.S. Patent Office

*"Sensible and responsible women do not want to vote"*

Grover Cleveland, 1905

22nd and 24th President of the  
United States

The point here is that even if everything appears fine now (which I will explore next), nothing ever stays the same. Two men with respectable titles made fools of themselves by failing to see this. Allow me to share a short excerpt from the Forward of John Gardner's Self Renewal - The Individual and the Innovative Society.

Heraclitus observed that "No one steps twice into the same river"; and twenty-five centuries later thinkers are still discovering the inescapable reality of change. Life and the world keep flowing and evolving.

Surely by now we grasp that truth. But we are of two minds as to whether we like it. There's something in us that fiercely resists change. And there's something else in us that welcomes it, finds it bracing, even seeks it out. It's the latter trait that keeps the species going.

Failure to face the realities of change brings heavy penalties. Individuals become imprisoned in their own rigidities. Great institutions deteriorate. Civilizations fall. Yet decay is not inevitable. There is also renewal.

Let us gauge the pace of change in resource management and in public administration in general. John Whitaker in the book Striking a Balance: Environment and Natural Resource Policy in the Nixon-Ford Years presents the case that environment, natural resources and energy were not issues during the 1968 Presidential campaign. He states that "in fact, Nixon staff members do not recall even one question to the candidate about the environment". In just 30 years - less than one career, these issues have come from the shadows to be high on the list of public concerns. They were certainly issues in the most recent campaign. The slime at the bottom of Boston Harbor got plenty of national television as it was slung between Bush and Dukakis. Beyond the campaign rhetoric, environment, energy and natural resources are major issues of the day.

With this new attention came rapid changes to resource management. John mentioned the changes brought on by the the National Environmental Policy Act of 1969 -- wildlife biologists, cultural resource specialists, environmental impact statements, etc. And policy continues to change (note the recent changes to the oil and gas leasing system). The job we do today may not be sufficient tomorrow. One of the few things truly perpetual is change.

Let us examine changes at a higher level: public attitude about government. The changes can be characterized by: loss of confidence; demand for less regulation; a cap on spending (no tax increases and a balanced budget). While resource management and deciphering public need are getting more complex, we are required to accomplish our same responsibilities with less. With the public loss of confidence in government and the emergence of special interest influence in public policy comes increased scrutiny and challenge to decisions made in the public sector. We must prepare as if every resource management decision will be challenged. Professional opinion will no longer suffice -- we must pursue a higher level of quantitative analysis and evidence to support our decisions, else we waste our precious few human resources answering protests and preparing our defense in the face of potential or actual litigation. Perhaps a resource allocation decision would be no different with or without LIS, but if the protests or adverse litigation resulting from a difference could be reduced, we win on two fronts--efficiency and public image.

Let us not be among those who fail to face the realities of change. I was insulted when Mike suggested our (those of us who believe in the system) motive is to make this agency a leader in technology. In ten years with BLM I have yet to meet a group more in-touch and dedicated to the missions of our agency - many of whom are career BLM employees who

started to work for this agency well in advance of the appearance of LIS on the scene. It is, I believe, our concern that our organization not be one of the "great institutions [to] deteriorate". Our motive is to provide the renewal, deny the otherwise inevitable decay. Rather than finding ourselves (as an agency) screeching to an ineffective halt five, ten or twenty years from now, we are positioning ourselves to meet the challenges which appear to be ahead.

#### Resource Management: Are We Doing the Job?

Mike posed the question: Can decisions be any better with LIS? Let me answer with a question: How do we measure quality of a resource management decision? There is no black and white answer here. Our mandate is multiple use resource management, the flagship doctrine of which is the allocation of resources according to public need, current and future. What could be more nebulous than "current and future public need"? I submit that any decision can be justified (or challenged) according to this mandate. Perhaps the only measure of poor quality decisions is sustained protests.

The only way to estimate the effectiveness benefits of LIS is to examine where the Bureau gets in trouble and where the circumstances might benefit from a higher quantitative level of data and analysis. For example, if we are in court (or are answering a protest) over a difference in the location of a critical winter habitat, currently, it may come down to a difference in professional opinion. In other words, the BLM specialist delineated the area while walking the ground and so did the Sierra Club (or energy company) specialist. Who knows how the ruling might come out in this case? Suppose a that the Bureau wildlife biologist testified that we used professionally accepted multivariate statistical model for habitat, using vegetation, slope, aspect, distance to water, etc., etc., accurate to 1 acre (or whatever) and verified our results in the field. It is now no longer my word against yours. We have a quantitative defense for our decision.

Why can't we do this manually? It is simply too labor intensive. Automation allows such analysis to be done with much greater efficiency. We should keep in mind that this technology is not exclusively available to BLM. Many private firms and special interests are acquiring these capabilities.

The analysis of "where the Bureau gets in trouble" and "where LIS can help" needs to be done if we intend to answer Mike's question of quality. I plan to put some personal effort into this (perhaps as a project for a future Management and Leadership course).

A little over a year ago, I asked John if he could prove to me quantitatively that his resource area was being managed according to the multiple use concept. After some discussion, we determined it could not be done. There are simply too many intangibles: defining current and future public need; quantifying the allocation of all Federally controlled resources and comparing that to the allocation of resources controlled by BLM, dealing with the scientific knowns and unknowns associated with manipulating our environment, etc. Are we making sufficiently "good" resource management decisions? The answer is prerequisite to answering the question: Can LIS help us with the quality of decisions? At present neither question can be answered. Once more from John Gardner, this time in The Recovery of Confidence:

"Until we progress further in our modes of analysis, we shall be repeatedly surprised by the consequences of social forces we can neither comprehend nor describe."

## Conclusion

"To achieve renewal we need to understand what prevents renewal. And most of the things that prevent it are to be found in the mind rather than in external arrangements. As every good management consultant knows, it is relatively easy to specify the things about an organization that need renewal; what is difficult to cope with are the habits and attitudes that permitted the organization to go to seed in the first place. Similarly, the economist has learned that after he has diagnosed the economic problems of an underdeveloped society, he must cope with the habits, attitudes and belief systems that prevent economic growth.

When we talk about revitalizing a society or an organization we tend to put exclusive emphasis on finding new ideas. But there is usually no shortage of new ideas; the problem is to get a hearing for them. And that means breaking through the crusty rigidity and stubborn complacency of the status quo."

These are the words of John Gardner, again in Self Renewal. I use this passage to introduce my conclusion and the single most disturbing statement of the entire dinner speech -- not made by Mike, of John, but by Lynn. Lynn commented in concluding that the vast majority of line managers in the Bureau current share Mike's attitudes toward LIS.

\*For a thought provoking look at defining quality, try Robert Pirsig's Zen and the Art of Motorcycle Maintenance.

There is no question, we are experiencing the computer revolution of which LIS is a part. It will likely prove to be as pervasive as the industrial revolution. What we need in this time of transition is leadership to guide us through as "the wind and the waves are on the side of the ablest navigators". While I am encouraged by the management level leadership that has been emerging of late, I fear a difficult transition for the Bureau if 70-80% of our managers remain to be convinced.

My concern is not so much that we have a large sales job to do. We can and will do it, even though it gets distasteful after so many repetitions. My concern is that we have to do it at all. As I stated earlier, I do sympathize with the immediacy of the tasks Resource Area Managers have, but I do not accept it as an argument against strategic action. Each of us has our immediate tasks to attend to and it is easy to get "tunnel vision" or, as it's called when a jet fighter pilot noses in, "target fixation". It is difficult to think about the larger picture when you are "up to your ass in alligators". But the ability to overcome this tendency is one characteristic, I believe, that separates leaders from managers. As Peter Drucker states in Managing in Turbulent Times:

"Each institution pursues its own specific goal, but who takes care of the common weal? - The specialized professional who graduates into general leadership. He [or she] does not cease 'to be a professional'; he [or she] must not cease to be one. But he [or she] acquires an additional dimension of understanding, added vision, and the sense of responsibility for the survival and performance of the whole that distinguishes the manager from the subordinate and the citizen from the subject."

What we need to achieve renewal is not just managers but leaders. Let's think about leadership in terms of followership. I would most prefer to follow the lead of someone with sound judgement, who has done some strategic thinking and is leading toward "the survival and performance of the whole".

My concern is for leadership now and in the short-term years ahead -- our time of transition, where we need leadership the most. We need managers that can, as Harlan Cleveland said in an article entitled "Education for the Macro Transition We Are In":

" peer into the middle distance, beyond next years balance sheet; help in analyzing alternative

*futures; help in charting the micro-problems with the macroproblem; help in reconciling special interests with the general interest"*

Is this leadership available to us now? I think not, if what Lynn said is true (and I have no reason to doubt it). The group we look to for leadership looms as a sizable challenge. The bottom line is this: we have a massive and difficult job of training and selling (being careful not to oversell) ahead. I can't think of any particular advice or strategy to help us through this task except to roll up our sleeves and get to it. I suspect our better leaders in the Bureau will see the value of strategic action relatively quickly (perhaps already have). But, we cannot give up on those that do not, especially as they are currently the majority according to Lynn. I am concerned that the percentage is so high. I might suggest that the Bureau revisit it's management selection and development process to emphasize leadership qualities - but I think I have reached beyond the bounds of my experience and the scope this position paper. It is frustrating though to have to expend our energies in this area, repeating the same justifications, fighting for every step. Perhaps our only consolation is that the most difficult victories are the sweetest, best said by Theodore Roosevelt:

*"The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood, who knows the great enthusiasms, the great devotions, and spends himself in a worthy cause; who at best, if he wins, knows the thrills of high achievement, and , if he fails at least fails daring greatly, so that his place shall never be with those cold and timid soles who know neither victory nor defeat."*

Those of us that find exhilaration in the task of Resource Management and the other responsibilities of the Bureau, and share the belief that LIS will help us accomplish our mission more efficiently and more effectively need to persevere. Given the quality of people contributing their energy, enthusiasm and influence to the effort, I am confident that we will prevail and the standard of living in this country (our ultimate product) will benefit from it.

Authors note:

I would like to offer my sincere thanks to Mike. I have hammered relentlessly on his opinions, but without his speech, these thoughts might never have been made it to paper. It took a certain amount of courage to stand in front of the audience he had and express his opinions, knowing the reaction would be what it was. Lynn, John and Mike participated in an important renewal exercise. As John Gardner states in Self Renewal...

*"It would be hard to overemphasize the importance of pluralism in helping a society [or organization] to escape the cycle of growth and decay. In an organization with many points of initiative and decision, an innovation stands a better chance of survival; it may be rejected by nine out of ten decision makers and accepted by the tenth. If it then proves its worth, the nine may adopt it later."*

It is of paramount importance that all opinions be heard and discussed. We must understand where Mike is coming from and he must understand our work. We, the technical specialists, cannot make LIS happen alone. It will only become a reality if the managers, users and technical specialists work together to make it happen. Thus, the "mega-meeting" dinner speeches served a critical function: the establishment of the platforms of the two camps, from which negotiations can begin and ultimately common ground can be identified.

## **LIST OF PARTICIPANTS**



LIS MEGA Meeting  
Attendance List

| Name            | Mailing Address | Office Phone   |
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| Shari Aikens    | AK-SO           | (907) 271-5057 |
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| Garth Olson     | AK-SO           | (907) 271-5063 |
| Gust Panos      | AK-924          | (907) 271-5063 |
| Les Rosenkrance | AK-SO           | (907) 271-5080 |
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| Paul J. Buff       | AZ-020 | 764-0501       |
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| Bill Childress     | AZ-020 | 764-0501       |
| Ted Cordery        | AZ-020 | 764-0501       |
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| Gene Dahlem        | AZ-932 | 261-5509       |
| Karen Daniels      | AZ-020 | 764-0501       |
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| Margo Fitts        | AZ-954 | 261-5558       |
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| John Gaudio        | AZ-921 | 261-5534       |
| William Gibson     | AZ-020 | 764-0501       |
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| Kniffy Hamilton    | AZ-020 | 764-0501       |
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| Celia Anderson | CA-S0  | 460-4749 |
| Jon Foster     | CA-S0  | 460-4722 |
| Ron Hofman     | CA-S0  | 460-4743 |
| Heidi Porter   | CA-S0  | 460-4759 |
| Skip Robinson  | CA-942 | 460-4775 |

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| Homer Gilson   | CO-942            | 776-1794 |
| Steve Gregonis | CO-943            | 776-1741 |
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| Rich Jolley    | CO-SO             | 776-1336 |
| Joe Kuka       | CO-SO             | 776-1741 |
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| Mark Negri      | ES-971 | 989-1350 |
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| Nina Madry      | ID-941  | 554-9510 |
| Duane Olsen     | ID-942  | 334-1438 |
| Ken Reninger    | BIFC    | 554-2480 |
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| Mike Gardner     | OR-942    | 429-2099 |
| Don Pearson      | OR-SO     | 429-6946 |
| Robert Wright    | OR-SO     | 429-7535 |
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| Brian Bernard           | SC-300  | 236-8583       |
| Troy Bunch              | SC-326  | 236-7345       |
| Dick Burkholder         | SC-322  | 776-6414       |
| John Cheatwood          | SC-342D | 776-6295       |
| Leofwin Clark           | SC-344  | 776-9931       |
| Thomas Costello         | SC-325B | 236-0144       |
| Phyllis Elliott         | SC-325B | 776-0163       |
| John Foster             | SC-344B | 776-0100       |
| Joyce Golos             | SC-530  | 776-6420       |
| Larry Hoovestol         | SC-672  | 776-0120       |
| Mike Huft               | SC-676  | 236-0171       |
| Ken Knutson             | SC-324  | 776-6640       |
| Bob Leopold             | SC-326  | 776-6420       |
| Janet Madson            | SC-155  | 236-0907       |
| Randy McKinley          | SC-154T | 776-6492       |
| Roger Molinar           | SC-324  | 776-6630       |
| Bob Moore               | SC-100  | 776-6452       |
| Rosemary E. Ravenscroft | SC-531  | 776-6701       |
| Ben Rumph               | SC-342  | 236-6518       |
| David T. Shaffer        | SC-315  | 776-0978       |
| Michael Thompson        | SC-322  | 776-9935       |
| Charles R. Tulloss      | SC-430  | 776-0191       |
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| Thomas Jensen      | UT-930 | 588-5716 |
| Arturo R. Martinez | UT-943 | 588-5973 |
| Jack Sheffey       | UT-S0  | 588-3139 |
| Jerry Sintz        | UT-S0  | 588-3129 |

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| Bruce Keating    | WY-SO  | 328-2238 |
| Patrick Madigan  | WY-SO  | 328-2283 |
| Rich Oakes       | WY-942 | 328-2455 |
| Kai Petersen     | WY-910 | 328-2050 |
| Phyllis A. Stone | WY-921 | 328-2109 |
| Dave Walter      | WY-940 | 328-2455 |

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| Rose M. Berezowsky | WO-771                  | 653-8853 |
| Adrian Caufield    | WO-771                  | 653-8853 |
| Ron DeRamus        | WO-770                  | 653-8853 |
| Jay Douglas        | WO-610                  | 653-2150 |
| Renee Duval        | WO-770, Rm 208, Premier | 653-8853 |
| Tim Foley          | WO-610                  | 653-2279 |
| Robert C. Gibson   | WO-680                  | 343-8537 |
| Charlie Grymes     | WO-704                  | 343-3306 |
| Roger Hildebeidel  | WO-880                  | 343-5060 |
| Berny Hostrop      | WO-720                  | 653-8798 |
| Annette Jameson    | WO-321                  | 343-5441 |
| Paul Lance         | WO-774                  | 343-5535 |
| Forest Littrell    | WO-760                  | 653-8824 |
| Stan McKee         | WO-650                  | 343-4636 |
| Dave Meiee         | WO-704                  | 653-7397 |
| John Moeller       | WO-700                  | 343-3897 |
| Jim Paugh          | WO-321                  | 343-8693 |
| Ed Roberts         | WO-770                  | 653-5021 |
| Vern Schulze       | WO-250                  | 653-9215 |
| Olivia Short       | WO-310                  | 343-6511 |
| A.A. Sokoloski     | WO-500                  | 343-4437 |
| Duane Sonnenburg   | WO-701                  | 343-2091 |
| Gary Speight       | WO-720                  | 653-8798 |
| Frank Splendoria   | WO-150                  | 343-5101 |
| Duane Tabb         | WO-730                  | 653-8811 |
| Dick Traylor       | WO-340                  | 343-9353 |
| Janis L. VanWyhe   | WO-704                  | 343-3897 |
| Tom Hawro          | WO-510                  | 343-4773 |
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"Man-in-the-Street Interviews"

Gordon Warren

Public Affairs Officer  
Arizona State Office



MAN IN THE STREET INTERVIEWS  
FOR LIS MEGA MEETING

Paula Krebs  
GIS Coordinator, Alaska State Office

"This (meeting) is a considerable advancement in the organization. It gives you an opportunity to air problems in our operational activities as well as get the biggest bang for the buck."

"It's healthy to meet our counterparts and share experiences. That's how we grow."

"Next year I would like to see more field people at this meeting."

Bill Lamb  
District Manager, Arizona Strip District

"The Mega Meeting is a beginning. I think it's (modernization) the only thing that will allow BLM to survive in the future."

LIS will give us so much information, and the ability to manage that information, that there will be no other way to manage. If we don't do it, someone else will do it for us."

Kai Petersen  
SAS to State Director, Wyoming State Office

"The Mega Meeting is a good idea. Most groups would meet four or five times a year anyway."

"The most important long-term gain of the Mega Meeting is the interaction among all the groups."

Tim Foley  
Chief, Branch of Fluid Mineral Information, Washington Office

"We're getting more active participation (because of the Mega Meeting) and now we're likely to go back and get more participation (at our respective offices)."

Nina Madry  
Supervisory Cartographic Tech., Idaho State Office

"This whole LIS is bigger than I thought it was. And through this whole thing, we're seeing how everything fits together and how everyone will benefit from modernization."

"I really see a need to include field people."

"I would be surprised if anyone back in the field offices understands just how big LIS is."

Glenn Coffman  
Information Systems Manager, Wyoming State Office

"This is an opportunity for all the automation players to get together."

"The main benefit is all of us getting together at once. This is good cross-pollination. The most good is coming from discussions during the breaks and evening discussions by being able to visit with all the key players."

Dick Kleckner  
USGS employee, National Mapping Division, Washington, D.C.

"We've heard a lot of new information that we haven't talked about before. We're getting some missing information cleared up."

"We're encouraged that there is more internal coordination in the Bureau. This meeting has been very helpful to us. Now we know where to go to get better coordination between agencies."

Candace Bogart  
Cartographer, New Mexico State Office

"Now I understand some of the issues of LIS from a national perspective. I have an overall view of some of the things that are happening and some of the problems."

## **LIS MEGA MEETING EVALUATION RESPONSES**



## LIS MEGA MEETING EVALUATION

PLEASE COMPLETE THIS EVALUATION FORM AND TURN IT IN BEFORE YOU  
LEAVE AT THE END OF THE WEEK. YOUR COMMENTS WILL HELP THE  
FIELD COMMITTEE IN FUTURE LIS MEETING EFFORTS.

.....  
DIRECTIONS: RECORD YOUR REACTION TO ASPECTS OF THE MEGA MEETING  
BY PLACING A CIRCLE AROUND THE APPROPRIATE NUMBER  
FOR EACH CATEGORY.

|                     | EXCELLENT | GOOD | FAIR | POOR | N.A. |
|---------------------|-----------|------|------|------|------|
| OVERALL MEETING     | 27        | 35   | 6    | 0    | 0    |
| JOINT SESSIONS      | 24        | 32   | 10   | 0    | 2    |
| GIS WORKGROUP       | 17        | 21   | 5    | 0    | 25   |
| GCDB WORKGROUP      | 2         | 4    | 5    | 7    | 50   |
| ALMRS WORKGROUP     | 3         | 15   | 1    | 0    | 48   |
| IRMAC WORKGROUP     | 0         | 15   | 2    | 1    | 50   |
| SODA WORKGROUP      | 6         | 24   | 5    | 2    | 33   |
| MSC WORKGROUP       | 3         | 10   | 5    | 1    | 49   |
| MEETING FACILITY    | 16        | 38   | 10   | 0    | 4    |
| LUNCH ARRANGEMENT   | 10        | 31   | 12   | 3    | 12   |
| COFFEE BREAK SET UP | 11        | 40   | 10   | 4    | 3    |
| BANQUET             | 8         | 19   | 13   | 6    | 22   |

Note: Many individuals added a comment to the "Banquet" item to the effect that the speakers were excellent but the dinner was too expensive; consequently, the score for this item is skewed to the right.



## LIS MEGA MEETING EVALUATION

### WHAT DID YOU FIND MOST VALUABLE IN THE MEGA MEETING?

Interaction in meetings and "after sessions" with counterparts from rest of the agency. Good exchange of procedures to resolve GIS problems/issues.

Joint sessions - updates of information - presentations which challenge the LIS concept and bring us back to reality.

The vision(s) of where we are going . . . interim and target system.

Exposure to "how big" LIS is and the different disciplines that are affected by this program. We need to be excited about this change and the meeting has made me excited to be part of what is happening in BLM now.

Opportunity to network and get done verbally.

It provided the opportunity to jointly surface and solve problems.

Making contacts; identifying issues that I have to work on was the most benefit.

The outside of meeting coordination, the ideas in the very few "other group" meetings I could attend.

Working with others to share experience and solve problems.

Interchange of information and interaction of the individuals.

Meeting with the people to work out problems.

Cross communication; leadership, upbeat goals.

Learning terminology and meeting the cast of characters. Learning more of my role in the future systems development.

The amount of organization that has gone into the system is really coming together and this knowledge was shared with other employees through this meeting.

To meet people I had heard about; to hear about policies and experiences from other states.

Sharing problems and solutions. Planning for fixes and enhancements to GIS. Getting a good idea of what we are supposed to do. Find out what works.

The cadastral survey selection of GCDB positions. Extremely well-qualified speakers.

The personal contacts.

The open discussions and presentations on a broad spectrum (ALMRS, GCDB, ARD, etc.) in a single forum. This provided a clearer picture of the LIS concept.

After hours communication.

Being able to interact with the various groups.

The opportunity to meet others in the Bureau and share experiences and knowledge.

Information gained; communication channels opened; personal contacts.

Meeting people, information exchange, mini-meetings, back-stabbing.

Seeing the Field Committee "operate" to resolve SODA controversy. Having the rare opportunity to talk to people from across the Bureau. I learned a lot.

The chance to meet with other workgroups - joint sessions - very informative.

Joint sessions.

Communication among participants - interface and exchange of data.

Able to communicate face to face with counterparts - \_\_\_\_\_ of other technology.

Ties total systems together and communicates what's going on, what we can do, what is needed.

Meeting the people - seeing how other offices do things.

The opening up the communication between Field Committee members and the designers and developers.

Finding out what other states are doing in various areas of land information system.

Information exchange opportunity between individual members of various workgroups "on breaks and after hours".

Contacts made during breaks in other disciplines.

An excellent chance to meet people in other offices and fields and share problems, concerns and possible solutions.

Interaction between different disciplines and offices in "after hours" meetings as well as during the scheduled meetings.

Information sharing between different components.

Gained knowledge on state of ADP relative to LIS. Renewing old acquaintances - met knew folks.

The opportunity to meet people and discuss their needs and problems.

Opportunity to share information, issues and concerns.

Communications, both formal/informal; good \_\_\_\_\_, wider group available to overall presentations in group sessions.

Interaction between groups and individuals.

The majority of the joint sessions were general enough for the average Bureau employee to understand what the plan for Bureau information refers to. Most of the speakers were good.

Bring together the many disciplines and opinions to better understand modernization and its consequences.

Information shared. In particular, between workgroups.

Interaction with other group members.

Being able to sit in on the other specialty meetings. Being able to meet knowledgeable people to answer questions.

Exchange of ideas. What is really happening.

Meeting other folks from different parts of the organization.

Communication between LIS functions.

General and individual communication with those involved in the modernization process.

Interacting with others and listening to people around the Bureau tell of their experiences - technology transfer.

Exposure to other groups.

Beneficial to be able to attend different breakout sessions to gain a better understanding of how the different components are working together.

Talking with a variety of BLMer's; State GIS briefings.

Meeting people who are working on projects related to mine.

Chance to talk to people in different areas of LIS and the Bureau.

Having everybody together so that decisions could be made.

Meeting of new people in the field - hearing what is going on.

Information exchange; clear explanations of our objectives, both interim and target; personal realization of the tremendous task before us and the level of effort that will be needed to accomplish it.

## WHAT WOULD YOU LIKE TO SEE CHANGED IN FUTURE LIS MEETINGS?

Expansion to include DO/RA managers - probably a half day offering in the workgroups (staggered among) emphasizing management perspective. Not on 1st day for commradie to develop - e.g., Tu AM IRMAC, Tu AftALMRS, w am GCDB WaftGIS. Same idea could be used as "user session" vs. business sessions of each working group.

More non-ADP people attending and presenting - need presentations on how LIS will help different parts of the organization do their job more efficiently and effectively - use examples of how a manager and resource people will actually use the system.

Videos, displays, poster presentations, enough handouts for attendees - a glossary of terms and acryonyms.

Combine GIS/Mapping Science workgroup. Each small group have a block of time to visit or be visited by each others discipline.

More open windows to attend other groups meetings.

Nothing

Joint sessions could be handled during evening dinner speaker time to allow more time for workgroups to interact.

Somehow I don't know how it needs to be scheduled so that those of us who were not floaters could get the exposure to the other topics - notes will not do it - I missed virtually everything I wanted to attend. This meeting was probably more educational for the less involved "floaters" - DMs, AMs must be sent to any future ones. (In "5 years" as Vetterick stated at the beginning.) We must get DMs, AMs, SO Branch Chiefs up. We must educate the very top managers - if they cannot communicate and sell using technical language similar to that the LIS specialists use, they cannot give the same message as the LIS specialists and they will not be giving effective support. We cannot afford to have our top managers with only a generic understanding this is not something they can passively rely on their staffs to express support for and talk coherently on.

More opportunity to join in workgroups or meetings in other specialties.

Bring in more managers to interact with the groups.

GCDB - not organized - \_\_\_\_\_, status and plans \_\_\_\_\_

More interaction between groups - encourage participants to float between meetings. Have a cocktail hour earlier in week to encourage discussion of problems.

Interaction of group participants in other workgroup sessions for information exchange.

Mixing of the individual workgroups. The banquet should be earlier on in the meetings - like Tuesday or Wednesday.

Same format, less general sessions, more time for workgroup sessions.

More users.

Less emphasis on production more on communication between groups e.g., production 2-3 hours; presentations 2-3 hours; small mixed group discussions.

More field prospective - all agendas need to be sent out in advance.

More District and Resource Area participation.

Very good as is.

More participation by field managers.

Eliminate Rodeway Inn for the overflow crowd - the cold showers and stopped up drains were a problem.

More planned interaction between groups.

More interaction between IRMAC and SODAs - in fact, real joint sessions and interaction between all the various groups.

Include more Area Managers.

A report from each workgroup on their progress and a report from each workgroup, on what they (it) have done since the last meeting. A meeting specifically targeted toward the Associate State Directors to train them.

Get more Area/District technical personnel involved.

Setting up a forum that allows for more cross-pollination between subgroups (GCDB, ALMRS, GIS, IRMAC). We need to ensure the big picture or focus is LIS and GIS, GCDB, ALMRS, IRMAC are a common team to support LIS.

More scheduled interrelating of the various groups, i.e., GIS and IRMAC.

Forum requiring interaction between workgroups. The NA for workgroups will show that few of us had that opportunity.

Earlier publication and dissemination of workgroup agendas - agendas in spreadsheet format for people who are rotating between workgroups.

Joint presentations by groups. Couldn't get to all the sessions when you are locked into your own.

Encourage more field managers to attend.

More group interaction in MEGA group. Individual groups meeting in pairs, ex. GIS-ALMRS, ALMRS-GCDB, etc.

Breakout room \_\_\_\_\_ need to meet group interests - high group interest breaks down in small/overcrowded rooms.

More District and Area Managers from each State Offices involvement.

Some groups need to get together such as GIS, ALMRS and SODA. To discuss where these interactive groups are going.

More detailed explanation on exactly what LIS is and how it will benefit the Bureau. Encourage more field managers to attend.

Nothing.

I went to the Managers and Translators Course and felt that some of the handouts really did more to clarify the program than alot of the discussion. Some of those handouts should have been distributed in this session.

More joint sessions! Workgroups were very good, but you couldn't attend every interesting meeting due to concurrent scheduling.

Add telecommunication managers and records managers to groups attending.

Design more "combined" small managers sessions to promote communication and coordination between them.

Have larger breakout rooms to increase comfort level and allow for two groups to meet together.

75¢ for a Danish is ridiculous and also for pop.  
some discussions probably could benefit with facilitation.

Agenda timetables in committee meetings adhered to so that you can bounce from one to another with more certainty.

Show and tell of each group.

Present more of what's do-able.

More managers.

A little more freedom to move around to other sessions. I didn't feel I could afford to miss any of my own workgroup sessions - maybe one free hour per day.

Just keep doing what we are doing.

More joint meetings - more emphasis on joint problem definition and resolution.

Would like to see a two hour block of time set aside for adhoc meetings. I couldn't attend a few breakout sessions due to other meetings being called. Seems like the majority of people were burned out by Thursday. Maybe 4 days is enough - I would like to see some speakers at the general sessions who are professional experts in various fields from software development to information modeling to motivational experts. This would help get everyone enthusiastic about what needs to be done and how every aspect of the LIS project depends on all the others.

I would have enjoyed hearing reports from the various workgroups in the final joint session. I didn't have a chance to get to all of the groups and would liked to have had progress reports.

Better organization overall.

Better organization from "key players".

Better advance notification.

Nothing that I can think of.

Add more lower level line managers for their enrichment.

Mixture of groups like ALMRS and GIS for cross discussions.

Please no more jargon or acronyms without explaining what these things mean. I believe those persons who rattled on, using jargon, etc., were not communicating with their audience, and may have alienated some (especially the ORACLE people).

#### HOW DID YOU FIRST LEARN ABOUT THE LIS MEGA MEETING?

-Anticipated 1 yr ago at Portland meeting, covered in MOSS conference in May as probability. LIS BB for 1st "written" comments.

Noel Granzow

Thanks Lynn - Thanks Noel - a great job!!

Draft agenda on 9-inch slip from ASO.

Through GIS Coordinator in my state.

By being an Arizonan.

Memo

From IRM/TAX and FC announcements.

Field Committee meeting - I was there.

Announcements in Fall.

From the WO LIS Coordinator.

When I was asked to sit in a panel.

Meetings with GIS group.

Supervisor advised me and asked for me to attend.

At local office.

Memo from State Office.

GCDB meetings

Steve Wing

Through CA SO LIS Team (AIM) meeting.

Gene Russell; LIS update info.

Memo indicating that I was a presenter.

Memo from ASD, Arizona.

Through IDCCC meeting.

Memo

Word of mouth from Lynn Engdahl in Sacramento IDCCC-w meeting.

From my manager when I was directed to attend.

Memos

Talk with Lynn Engdahl approximately 6 months ago.

When I was told to attend in December.

Word of mouth - moccasin telegraph - rumor mill - who can remember.

Division announcement and extended permission to attend.

A memo on my desk that said I was going.

Through the mail system.

By memo

Engdahl's note to various workgroups.

Memo to 770 (IRMAC)

IRM Branch Chief

Middle of November

Field Committee

Word of mouth

By mail

I was told I was going

Field Committee meeting

Memo

LIS Bulletin Board on PC

October 1988 through the Arizona Management Team

IDCCC

By IRMAC Group Member.

IMS and through my group leader.

State IRM committee meeting.

Supervisor

Memo

State Office memo.

Word of mouth in District Office.

Memo and I heard about it from SO people.

Not sure - rampant rumors probably.

When I was at the DSC for a meeting.

The boss

Verbal, from co-workers.

From my supervisor.

The boss

Steve Wing told me.

Memo

IF YOU HAVE ANY SPECIFIC COMMENT ON LIS, ITS COMPONENT SYSTEMS (ARD/ALMRS/GCDB), MAPPING SCIENCE, DATA STANDARD DEVELOPMENT, DATA ADMINISTRATION, OR ACTIVITIES OF THE IRMAC OR THE IDCCC, PLEASE USE THIS SIDE OF THE SHEET TO GIVE US YOUR COMMENTS.

LIS (ARD) - I believe that our discussions showed that we understand our problems. I not so sure that we know exactly how we are going to deal with them effectively between now and target. Specific issues include data capture, data standardization, and sufficient budget to implement them.

Communications about LIS, for learning process, need to become a way of life within BLM. Learning about the complexities of LIS must be \_\_\_\_\_.

The WO needs a strong central focal point. It is great to have Vetterick and Engdahl and Rosencrance and Jordan and Hofman and Moeller and Sonnanburg and Van Wyhe and others - pushing us into the 21st Century. However, there is a strong feeling that BLM is going in several directions at once and many of us are very uneasy. I feel we are on several parallel tracks and we may be doing things twice, inventing several nearly similar wheels at the same time. I believe we are suffering from the lack of a strong person at the Washington Office level to pull it all together. I believe there are problems with ALMRS leadership at DSC which are at such a high level they can only be solved by a strong leader at WO. I hear we are inputting and unable to get anything out. I hope the ARD software development is watched over carefully by someone who is in communication with SO ARD Coordinators and can make sure their concerns are listened to by SC programmers. I spent a lot of years at the SC and I know their greatest weakness is a failure to understand the field and a high level of energy in forging ahead in the direction we should all go. I am not saying we are heading in the wrong direction - I simply would have a higher comfort level if we had a strong focal point at the WO level.

In a meeting of this kind, it's easy to lose sight of the fact that all these systems and their integration (we hope!) are for the ultimate purpose of helping us manage on-the-ground resources. It's important, therefore, to get and keep the resource specialists at all levels, but especially the Resource Area, involved in using these systems to do their job better.

Would like to see someone talk about the future of APD and what direction it is headed.

Standards Enforcment - what happens to those who do not change??

Thank you for inviting the USGS to your meeting. We learned a great deal and gained a feeling of confidence that will certainly help interagency cooperation.

We all realize by now that automation is a fact of life. But that along doesn't solve the problem or prompt support for its use. I strongly suggest getting the field involved in Data Set and standards. If you expect the field to except the system and use it to its fullest capabilities you're got to get the field involved in using it. To many of the people in the teams are from SOs, WO and DSC. You need to load the team \_\_\_\_\_ with DO or Area people.

Good way to communicate, we need this at least once a year. GCDB is going to take off, we won't be behind for much longer so ALMRS and ARD you better get ready.

Assure that there is coordination between ARD/GCDB/IDCCC/Mapping Science and ACSM in developing standards. Have agenda published and distributed well in advance of the meeting. MSC needed a better agenda.

Use bottom up approach to building/updating the D.E.D. Rely on past efforts instead of re-inventing the wheel.

Many concerns, particularly w/data administration.

Also, decisions that are being made independent of IRM organizations that directly impact said IRM organizations for "interim" implementations.

Why has there been an effort to set organizational structures for GCDB, ALMRS, Data Administration but was never done for ARD or GIS?

I believe our higher level management should sequester themselves for a week or so and be trained in these LIS/GIS/GCDB/SODA/ARD efforts. I realize they may never be "experts" in the data field but they are making decisions on spending nearly 200 million dollars soon. With that much responsibility, they owe it to the public to make those decisions from the most educated level they can. From what I have seen, they need a great deal of education on those topics.

Have speakers in all sessions and groups identify themselves and their position in the organization. Without an organization chart, it's difficult to place names with position.

Keep Area Managers on the agenda.

The BLM's distributed organization is the biggest problem to automation in a coordinated fashion. Orders come from the WO, and SO and funding comes from yet another entity - money the real boss. Our organization is so fragmented, an extremely strong hand from 'someone' will be required to stop many groups from going off in their own direction. If BLM managers continue to serve multiple masters then multiple use and automation will continue to have many faces.

The funding for all of these programs must filter to the Districts. We actually received 4 WMs to fund 2 fulltime employees and our entire ADP/LS program for FY 89, consequently we are supporting this program from Resources Program funding.

Issue "gold cards" to Cadastral Survey either at WO 720 or State Office level for spending in GCDB. Doling out \$ a little at a time from DSC is inefficient and at times counterproductive.

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